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ORIGINAL ARTICLES.

A REVIEW OF METHYLENE BLUE EOSIN BLOOD STAIN, AND A REPORT OF SOME MODIFICATIONS IN METHOD OF PREPARATION, WITH ILLUSTRATION.

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One of the most important clinical observations we make is the condition of the blood, which, on account of the delicate technique required, is often neglected or made in such a cursory manner as to afford little or no valuable information. The microscopic examination of fresh blood is of clinical value in ascertaining the number of red and white cells; also, in part, the general condition of the red cells, and it *may* show the presence of blood parasites as malarial organisms, filaria, etc.; but, as a rule, the most accurate information requires a well-made, well-stained blood film, showing the histologic and pathologic elements so clearly defined that they may be readily recognized. This can be accomplished only by the use of a good differential stain, and that which is attracting most attention for general blood work is some combination of methylene blue and eosin, which has undergone various methods of preparation during the past decade.

The principle on which this stain is made is that originally demonstrated by Ehrlich, viz.: that it is possible by the combination of aqueous solutions of basic and acid aniline stains to form neutral stains. Thus, the methylene blue forms the base and the eosin the acid of the neutral stain called an eosinate of methylene blue. In its application to cell structure the neutral stain stains the neutral elements of the cell which are not well stained by either component of the neutral stain if used alone; the acid elements of the cell select the basic component, and the basic elements select the acid component of the neutral stain.

Without going into the chemistry of the stain, it suffices to say that an oxidation product can be generated in the methylene blue solution called methylene azure or methylene red, which, being a chromatin stain, greatly enhances the value of the combined stain. Most of the methods of preparing methylene blue oesin stain have been modifications of the Romanowsky method, in that a polychrome or oxidized methylene

blue solution has been used; therefore I shall mention in review only some of the most important advances in the development of this stain, and add some modifications in method of preparation which I have found satisfactory.

Romanowsky used an alkaline methylene blue solution, which was allowed to stand until mould formed upon the surface, oxidizing some of the alkaline methylene blue into methylene azure. Of the methods preceding and succeeding Romanowsky's, those using any kind of oxidized alkaline methylene blue obtained some chromatin staining; the others were deficient in this regard.

Nocht isolated the methylene azure from polychrome methylene blue, and he (likewise Giemsa) used it in combination with eosin, the films requiring previous fixing and a considerable time for staining.

Jenner did not use an oxidized blue solution, but he was the first to use methyl alcohol as a solvent of the combined methylene blue and eosin, which obviated the necessity of previous fixation of the film, the fixing and staining being done at the same time in a few minutes.

Goldhorn and others found that heating the methylene blue solution over the water bath hastened the oxidation of the solution, thus greatly economizing time in preparation.

Leishman and Reuter found that the staining power of the alcoholic solution, especially as regards chromatin, was greatly increased by the addition of water to the stain on the blood film.

Wright made use of the Arnold sterilizer as a means of heating and rapidly oxidizing the methylene blue solution.

A few of the prepared staining solutions which I secured from different sources gave good staining reaction, but other samples obtained from the same sources gave quite indifferent results, and I have endeavored to ascertain the reason for such variations.

After numerous preparations of the stain during the past two years, I have found the following method uniformly satisfactory:

Prepare fresh solutions of the primary stains.

Methylene blue solution.

Sodium bicarbonate thoroughly dissolved in distilled water to make a one-half of 1 per cent. solution; to which add sufficient methylene blue to make 1 per cent. of the blue. Steam in Arnold sterilizer for one hour, then cool.

Eosin solution.

Make a one-tenth of 1 per cent. solution of yellowish aqueous eosin in distilled water.

Add the eosin solution to the methylene blue solution, stirring the mixture constantly, until about five parts of the eosin have been added to the blue; then begin testing the staining reaction of the mixture, in a sense titrating the stain and controlling the end reaction by the actual application of the stain to freshly-made blood films. This test is quite

easily made by filtering ten drops of the mixture through a small piece of filter paper, dry the residue on the paper and put it in a small test tube with about ten drops of pure methyl alcohol, agitate thoroughly to disolve stain on filter, and with this stain a freshly-made blood film. This will give an index of the staining reaction, and more of the blue or eosin solution may be added until the test gives the desired results. A light pink color of the red cells in the thin areas of the film and a bluish color of the thick areas is most satisfactory, since with this color the other blood elements stain clearly; if the red cells are an intense pink the blue is over neutralized and the white cells and organisms do not stain well; if the red cells stain too blue there is not the contrast necessary to show clear definition of the other elements.

When the mixture is finished it should be filtered through filter paper and thoroughly air-dried, or dried over the flame at a distance easily borne by the hand. Make a saturated solution of the powder, about three-tenths of 1 per cent. in pure C. P. methyl alcohol, filter and add to the stain one-fourth more of the alcohol; or make a one-fourth of 1 per cent. solution of the residue in C. P. methyl alcohol and filter. Preserve in tightly corked bottles in the dark. Keep the bottle quiet when using, avoiding shaking, so as not to distribute through the solution any precipitate that may form.

In applying the stain filter ten drops directly upon the unfixed film; or use a pipette freshly rinsed in methyl alcohol, take ten drops of the stain from the center of the solution, put on the unfixed film; leave one minute, then add to the stain on the film one or two times as much distilled water as stain and leave two or three minutes more; wash quickly three to five seconds under strong stream of distilled water; dry promptly with blotter; then air-dry thoroughly or hold over flame at hand distance; mount in *pure* balsam. The entire procedure requires less than five minutes.

The film will vary somewhat in thickness, the color of the thin areas being light pink and that of the thick areas bluish.

It is preferable to make thin films on slides, which should be thoroughly cleaned and polished before using, and the blood should be transferred to the slide as soon as possible after the drop appears.

The lobe of the ear is the best site for taking the blood, and a Hagedorn needle excellent for puncturing the skin.

The thin films are usually preferable for blood examination as they give good detail of all the blood elements and parasites, but in examining for malaria if the parasites are few they may be more easily found by the Ross method; viz.: in taking the blood on the slide make a large moderately thick drop instead of a film, dry thoroughly, then allow a little distilled water to flow carefully over the blood and remain until the hæmoglobin is washed out of the red cells, leaving the blood whitish in color, pour off the water carefully; again dry thoroughly, and stain

the same as a film. The red cells do not stain, the white cells and blood plates stain fairly well, the organisms do not stain as well, but their pigment especially will appear distinct and they will be more abundant on account of the thick film, consequently the ease of finding them is relatively increased. This method is useful also in examining blood for bacteria.

The sooner the blood is stained after it is taken the better the staining reaction; films several days old will give good results, but the staining susceptibility deteriorates. Old films stain better if a little distilled water is allowed to flow carefully over the film, poured off quickly and dried just before staining.

As different samples of blood vary somewhat in alkalinity, so also will there be slight variations in the color reaction, but they do not impair the value of the stain, and may in some diseases prove of pathologic significance.

Slight variations in the amount of water added to the stain on the film, the length of time it remains, and the length of time it is washed may vary the tint somewhat, but with ordinary care uniform results will be obtained.

If the stain is kept quiet, slides thoroughly cleaned, films well spread, the stain not allowed to evaporate on any portion of the films before the water is added, and a strong stream used in washing off the stain, there will be little or no difficulty in the precipitate, which forms while staining, adhering to the film.

The stain improves for a time, and, if properly preserved, it keeps for months in solution, the powder indefinitely.

Other strengths of the primary solutions than those mentioned give good results if the mixture is carefully tested in making; likewise somewhat weaker solutions of the powder in the methyl alcohol are fairly satisfactory, but weak solutions require a relatively longer time to stain after the water is added to the stain on the film.

I have found Gruebler's brands of stain satisfactory, viz.: his "Med. Methyline Blue," "Bx," "Koch" and "Ehrlich," and "Yellowish Aqueous Eosin B. A." I have secured good results also with Merck's "Med. Methylene Blue" and "Yellowish Aqueous Eosin."

It is important to know that the methyl alcohol* is pure, or at least neutral in reaction, since some of the C. P. methyl alcohol contains a trace of acid which may be sufficient to interfere with the blue. The alcohol should be C. P., and if found to be faintly acid, as can be determined with litmus paper, it should be neutralized with sodium bicarbonate solution before dissolving the stain, otherwise the eosin will be too intense, and the blue very pale. If the alcohol used has not been cor-

* Kahlbaum, of Berlin, supplies a methyl alcohol which is said to be free from acid, and I have found it satisfactory without any correction. I have obtained it from Eimer & Amend, New York, and Heil Chemical Company, St. Louis.

rected when necessary, a little of the sodium bicarbonate solution may be added to the finished stain, which will intensify the blue.

It is also essential that pure distilled water be used for making the stain, likewise for diluting the stain on the film and in washing the stain off the film.

The methylene blue eosin stain gives the following reaction:

Red cells, cytoplasm light pink or yellowish, nuclei dark blue.

Lymphocytes, cytoplasm pale blue, nuclei dark purplish blue.

Large mononuclears, cytoplasm light purplish blue, somewhat granular in appearance, nuclei purplish.

Polynuclear neutrophiles, cytoplasm unstained or very light purplish blue, nuclei dark bluish purple, granules purple or reddish purple.

Polynuclear, eosinophiles, cytoplasm unstained or very light purplish blue, nuclei dark bluish purple, granules pink.

Mast cells, cytoplasm unstained or very light purplish blue, nuclei light purplish blue, granules deep reddish purple, or blackish.

Myelocytes, cytoplasm unstained or very light purplish blue, nuclei purplish, granules reddish purple.

Malarial organisms, trypanozomes and similar organisms, cytoplasm blue, nuclei red or dark reddish.

Pigment of malarial organism unchanged, brown or black.

Granules of red cells, incident to contained malarial organisms, pinkish.

Granules of red cells, incident to anæmia, blue.

Bacteria blue or purple.

Blood plates reddish purple or bluish.

In conclusion, the chief advantages of such a combined methylene blue eosin stain are the following:

The rapidity of application; the power to stain cytoplasm, chromatin and granules; the good differentiation of leucocytes, the clear staining of pathologic elements, and the durability of both the stain and the stained preparations, which latter keep well for a year or more.

As a result of numerous tests and observations, I believe that the reason for the variation in the staining power of the different samples of the stain made by the various methods is that the primary solutions have been combined in too definite quantities; not adapting these solutions, which may vary somewhat, to each other; also, that not sufficient attention has been given to the purity of the methyl alcohol and the distilled water.

I have obtained uniform results in making the stain by some of the other methods when I have titrated the mixture and used *pure* distilled water and *pure* alcohol.

I have used many of the blood stains for different pathologic conditions, but during the past two years I have relied upon the oxidized

methylene blue eosin exclusively, and can fully corroborate Cabot's opinion as expressed in the new edition of his work on the blood, viz.: that it is the best for all purposes for which one uses a blood stain at all.

I would especially emphasize the following points concerning it: Use some of the reliable crude stains for making the primary solutions, test the staining power of the mixture well before filtering and drying, be sure that the C. P. methyl alcohol is neutral, and use pure distilled water.

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AMPUTATION NEUROMATA, WITH THE REPORT OF THREE CASES.*

By Thomas H. Manley, Ph. D., M. D., of New York.

Aside from the dangers attending any major amputation and the serious loss involved, every cautious, conscientious surgeon always must experience unpleasant misgivings as to the ultimate behavior of the resulting stump after healing is complete; because, through the operation of various causes beyond one's control, fashion the flaps as we may, a sensitive, painful stump will often result, sometimes demanding a consecutive resection, and frequently forbidding the use of an artificial limb with any degree of comfort or security.

This occurs usually through the operation of two conditions; one from pathological changes in the osseous structures, caries or necrosis in the ends of the divided bones, or interstitial fatty degeneration, a species of localized *mollites-ossium;* secondly, from a lesion of the large nerve trunks, with, at times, hypertrophy or bulbous enlargement of the ends of one or more of them.

It is my impression that the neural sequelæ are by all odds the most distressing and the most frequent, though they only occasionally call for operative relief.

Every surgeon is familiar with the delusive, yet disquieting sensations so many patients experience over varying periods of time, in the heel, in the sole or in the toes of a foot cleft from the body; and, again, the spells of excruciating spasmodic pain they suffer in an apparantly healthy stump; sometimes the seizure coming on in the middle of the night, when all the muscles of the limb are thrown into the most violent, convulsive contraction, the patient failing of relief until he seizes the limb and forcibly holds it in position, when the nerve storm passes off.

Again the whole stump, or certain areas of it supplied by a sensory

* This manuscript was received a short time before the death of Dr. Manley, but the publishers were unable to give it space in previous issues.

nerve trunk, remains exquisitely hyperesthesic over a long period before the limb is "broken in" to wear an artificial limb.

The most melancholy feature about this phenomenon is, that it may be witnessed equally as frequent when the osseous ends are well clothed by integument, as when the breach is filled in by scar; and in some instances, it may remain permanently and preclude the possibility of ever wearing an artificial limb.

Bulbous Enlargement of the Nerves.—Although the term bulbous enlargement of the nerves after amputation had been heard of by me since my early days in practice, it was only within comparatively recent years that it was possible to convince me by ocular demonstration that such a condition could exist. It had long, however, been well known to me that no tissue whatever in the body possessed the regenerative activity of nerve, and that it manifests an inveterate tendency to bud and grow in the direction of its long axis after division, and anastomose or unite with another nerve lying in its path.

When a search was made into the literature of the subject, it was evident that bulb-endings of nerves were either unknown or disregarded by surgeons in general, as in many of the larger text-books and treatises on surgery by eminent authors no mention of this condition could be found.

But, if we find little on amputation-neuromata surgical literature is comparatively prolific in accounts of other neuromata, pathological and traumatic; many of them are recorded as calling for amputation of the limb, notably, those involving the deep plantar nerves, or those seated deeply in the deep tissues of the hand.

Lawrence reported a case of amputation of the foot for supposed sarcoma. After amputation a massive neuroma was found. Tyrell points out that in amputation-neuromata "there is no constant relation between the volume of the tumor and the intensity of pain."

Smith records an example of the above class of tumor in the stump of a forearm amputated ten years previously. The patient suffered almost insupportable pain; there were three neuromata; two were indolent, those of the median and ulnar nerves; the painful one was in the bulb of the internal-cutaneous.

Girard's case points to the tendency of recurrence in some instances. His patient, a man of fifty-six years, lost his arm by a crush twelve years before in the middle of the humerus. For two years before Girard saw him, severe pain existed. A neuroma the size of a cherry was discovered growing from the brachial plexus. This was excised. In the course of the two following years regrowth was so rapid that it had to be resected three times. It appeared again for the fourth time, when it was destroyed by the electro-cautery; after this there was no relapse. Before the latest means were adopted, the patient begged to have the limb amputated.

Johnson cites an instance of triple neuromata in a vigorous young woman of twenty-seven years, whose forearm was crushed by a machinery accident, and an amputation had to be performed. Three years afterward so distressing was the pain in the stump that she returned for treatment. Bulbous enlargement of three nerves, the median, ulnar and radial was discovered from free expansion, and all found blended in the scar tissue of the stump.

They were all resected. Nine months after there was recurrence in the ulnar. After the new growth was removed there was permanent relief. Several remarkable and instructive examples of amputation-neuromata may be found in the writings of Swan, Billroth, Blazius, Ellenmeyer, Hilldebrandt, Greiswald, Ashurst, Rocher, Forgue and Le Dentu.

Etiology.—I have been unable to find any case of amputation-neuroma recorded as occurring, except when a limb has been amputated for trauma. Nor does it appear that, with but one exception, any surgeon recommends such technique as may obviate those new growths after the flaps have healed.

Some years ago, Dr. N. Senn insisted that if the nerve trunk was well drawn down and made *conical*, by removing a v-shaped piece from the center of the end and then carefully closing in the nude ends, by suturing the sheath, bulbous enlargement would not be so liable to occur.

But in spite of these precautions in one of my own cases, large expansion of the nerve followed.

It is probable that clubbing of the nerve ends occurs more or less after all amputation. In the near future, it is my intention to endeavor to inquire into this phase of the subject, by the dissection of old stumps on the cadaver.

After amputations, especially in young subjects, the divided nerve continues to grow until it is arrested by the tissues in the stump, or is projected against the sheath of a muscle or the inter-muscular fascia.

If it be a motor nerve which is involved, and if the outgrowth is not large, it remains indolent, but if it consist of a sensory nerve-trunk, or even if there are numerous filaments gathered up by the enlarging end, neuralgic pains with spasm are prone to follow. It is probable that, however, in the greater number of cases, the nerve tissue in the bulb itself is insensitive, especially in old cases In none of my cases did the microscope show any distinct evidence of the normal medulated nerve fibre or the axis cylinder in the central substance.

That sensation is transmitted from neighboring filaments was demonstrated in my last case, operated under cocaine-analgesia, because, after the bulb was lifted out of the incision and entirely freed before division, on severe pressure, while the patient was conscious of the manipulation, he said there was no pain whatever.

Treatment.—Treatment is tentative and radical. When, for various

reasons, we suspect the operation of constitutional causes, they should receive our attention.

Some authors regard syphilis as an etiological factor; others affirm that only neurotic patients suffer. It is probable that in most instances the dominant pathological changes are in the nerve-sheath and the perineural elements; certainly the atrophied and transformed nerve cell of the interstitial substance cannot be regarded as a factor in producing reflex spasm.

Local measures with rest of the stump have often sufficed in my hands, in several cases pointing to bulbous hypertrophy; moreover, in all, if an artificial limb is worn, it must be set aside till hyperæsthesia has passed completely off.

If, however, simple local and constitutional measures fail after persevering trial, then we must resort to operation; but bearing in mind the possibility of an early regrowth, we will do well to be reserved in prognosis.

NOTES ON CASES.

Case 1.—Patient male, thirty years old, left limb crushed below the knee by a runaway accident, July 4, 1891. Amputation midway between knee and ankle joint two weeks later; stump covered by a Teale flap; primary union. After six months, he wore an artificial limb.

Came to me after five years, because of agonizing pain in the stump; most distressing seizures coming on at night, after long standing in the management of a restaurant.

Under aspect of the stump, where flap was the thickest, was the most sensitive point. Temporizing expedients gave no effective relief. Sent him to Metropolitan Hospital; when under ether, the point of highest sensibility was freely divided, and a bottle-shaped clubbing of the end of posterior-tibial nerve was exposed and removed. The relief was immediate, and has remained.

In this case it was remarkable before operation how widespread the reflex spasm was, when the sensitive spot was pressed on, throwing all the muscles of the leg and thigh into convulsion, twitching with alternate, powerful contractions. Again, there were intervals when spasm was absent, but the whole stump was extremely painful, especially when an attempt was made to wear a support.

Case 2.—Patient, a powerfully built negro, forty-two years old, while stealing a ride on a freight train moving out of New York, fell and had the left lower limb crushed by car wheels just above the knee joint.

This was in January, 1890. An amputation was made, employing a circular flap. Union was tardy, owing to a partial sloughing of the flap.

Ten years later he came to me, complaining of great suffering from pain in the stump, it being more or less severe for three years; but now it rendered sleep impossible, and he begged relief by any possible means

Examination failed to reveal any evidence of osseous lesion, but the tissues over the stump were everywhere extremely hyperæsthetic. Many a night, he said, he had to sit up in bed and "hold the limb down," so violent was the spasm, when, he declared, "the pain went up to the very hairs in his head."

He gave a history of having consulted several physicians and tried various remedies, but without help.

In this case, on dissection, it was found that there was a massive mushroom expansion of the sciatic nerve, widely spread out and firmly incorporated into the tissues of the stump.

Operation was performed under a pulmonary anæsthesia. A dissection was made up about four inches, between the muscles of the ham strings, when bulbous nerve was resected. Union was rapid. Two years later I saw him, when he enjoyed complete relief.

This, with the preceding case, illustrated the comparative simplicity of operation for relief and cure in this condition. It is unnecessary to keep the patient in bed any time at all after anæsthesia passes off. This patient left the hospital the same night after operation, returning on crutches for one or two later dressings.

Case 3.—Patient, twenty-two years old, brakeman, had his left arm crushed by being run over by a railroad car in Long Island City in June, 1896. An amputation was made about two inches above the elbow. One year later he was sent to me by Dr. J. M. F. Egan, of this city, with an osseous protrusion throughout the end of the stump, accompanied with ulceration in the adjacent soft parts. The projecting necrotic bone was removed, together with about two inches of the investing soft tissues. This involved an exposure and division of the three large nerve trunks at this point. Bearing in mind Dr. Senn's admonition as to the manner of dealing with the divided nerves, his technique was adopted in all its details. Repair was rapid. One month ago he came to me again, this time to the Metropolitan Hospital, for relief from a distressing affection, not *in the stump*, but *above it*, on the inner side of the arm, three inches above the stump. Here a distinct, movable, but exquisitely sensitive, tumor could be made out. When the arm was raised and the biceps relaxed it came easily under touch. On slight pressure all the muscles went into spasm, with distressing pain.

In this case, at the patient's request, cocaine, hypodermically employed, was substituted for pulmonary anæsthesia, and it served the purpose admirably. On dissection it was found that the tumor consisted of the enlarged ends of two nerves, viz.: The median and the internal cutaneous, both enclosed by the same sheath. Section was made high above the point of inosculation of each nerve. Union was prompt, with entire relief.

This case was instructive, because of the composite character of the complication of the sequela after amputation, viz., the *osseous* first, and

the *neural* consecutively. Moreover, it proved that local cocanization may be utilized with perfect satisfaction in this type of neurectomies. And here, too, we had an example of two nerves in *one* bulb. These few cases are certainly inadequate to generalize on, but as far as they go they teach us that in highly sensitive stumps after amputation, when simple expedients have failed, persistent neuritis in the clubbed nerves, with accompanying agonizing pain, should be always promptly relieved by a very simple and safe operation, which may be performed under local analgæsia, and one which need not invalid a patient in bed a single day. My third case pointed to the inefficacy of the Senn method of treating the nerve ends with a view of prophylaxis.

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NOTE.—Since the foregoing was prepared for publication the large atlas and text on the "Pathology, Diagnosis and Treatment of Neuroma," by Robert W. Smith, F. R. C. S. I., came under my notice, and though published before the writer was born (1851), in none of the later contributions have I found the subject here so fully and ably dealt with as by this Irish surgeon in Dublin; and believing that a few abstracts on "Amputation Neuroma" would be most acceptable to surgeons, these few quotations are added. He said of the amputation-neuromata, the post-operative nerve-bulb, "Their existence in such cases is so constant that we may perhaps consider them as representing the normal condition of the nerves in the stump."

Although in some instances they are productive of paroxysms of neuralgia, yet in the majority of cases they are not the source of any uneasiness whatever. Richet claimed that their size bears a direct ratio to the quality of the surrounding cellular tissue and the length of time which may have elapsed since the division of the nerve. The largest tumors are connected with the largest nerve-trunks, and this is what we would expect if we are to consider them as being formed for the protection of the divided extremity of the nerves. . . . .

The nerve tumor is usually formed at a variable distance from the end of the stump, by which it is less exposed to irritation . . . . I cannot agree with those who declare them to be due to pressure on the end of the stump, because they are constantly found to exist, when from the period of amputation up to the decease of the individual, the stump has never been subjected to any pressure. . . . . I believe that the final object of these formations is for the protection of the divided nerve end. To the question then of Cruveilhier, "*Ces renflemens sontils un moyen de protection pour les extremities des nerves?* I would reply in the affirmative, though this distinguished pathologist appears inclined to ascribe them to the effects of pressure."

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INDIFFERENCE TO DIAGNOSIS ONE OF THE DANGERS OF MODERN SURGERY.

By Jacob Block, M. D., of Kansas City, Missouri.

Aided by the modern auxiliaries, anæsthesia, hemostasis and asepsis, the surgery of the past few decades has probably kept pace with the advancement of the arts and sciences in general. A critical review only, however, can determine the truth of this statement. That the average layman has enthusiastically accepted it counts for little. An association of critics, including those drawn from other scientific fields, as well as that of surgery, would be the only competent court to decide. Acknowledging such a composite tribunal as indispensable to the solution of the question at issue, it is not my purpose to more than assume its probability.

Emboldened by the security afforded the operating surgeon through the means just indicated, he has invaded every possible terrain in the human economy. What were regarded as the chimerical previsions of the hopeful and enthusiastic are now accomplished facts; the vagaries of a disordered brain the acknowledged clairvoyance of a giant intellect.

Eager to reduce theories to fact, every means has been employed in the development of perfection in operative technique. Whatever collateral art or science could offer or suggest was appropriated as the inherent right of the operating surgeon. The art of surgery, partaking of the spirit of its environment, yielded to the material demands of the age, where apparent success is the only criterion of merit. Nor has this utilitarian spirit been without its achievements, though chargeable with a percentage of faults.

Experiments looking to the relief and cure of the previously hopeless have brought comfort and health to countless thousands. Reduced mortality, the elimination of suffering and economic conservation are

the proud triumphs of the benevolent as well as the ambitious or, perhaps, even the commercial surgeon of the present era.

A spirit of restlessness, brooking no delay, has supplanted the tireless efforts of the subtle diagnostician. Where obscurity involves a plea for time a sanguinary prestidigitateur exposes the *raison d'etre* to the astonished gaze of the clinician. Where the diagnosis is all but certain he will not renounce his right. The knife only can reveal the cause. The pathologist even is forestalled by this intruding usurper. Exploratory and confirmatory sections, either synonymous or simultaneous, claim their rights.

To further develop surgery as an art, instruments of precision have rapidly multiplied to aid the senses where trenchant methods were neither available nor politic. That they have accomplished much is attested by the splendid achievements of those skilled in their use. They have diagnostically substituted the clever but uncertain guesses of the clinician and operatively minimized the risk, pain and expensive delays incident to more heroic methods.

Reducing diagnosis to an artistic objectivity seems to be the aim of some extremists. Not only are they indifferent to valuable subjective data, but they even regard them as misleading and dangerous.

With the development of surgery as an art, skillfully employing the mechanical means prompted by the scientific and material requirements of the age, what has become of the anatomic, physiologic or clinical surgeon? Has he developed pari passu with his artistic competitor?

With a Wagnerian display of sound, color, light and other accessories in the amphitheater, where is the soul of the affair? Who but the distant composer knows its motif? The artist even, not to speak of the inquiring spectator, is often innocent of this leit motif, and remains uninitiated.

But there is a charm about that which we do not sufficiently apprehend, and especially when guaranteed by a sponsor of reputation. Here is the opportunity for the charlatan, and that the commercial pretender is making use of it is a daily experience.

To the ambitious but honest, it is a safe conduct to satisfy an enthusiastic craving to allay suffering and acquire renown.

With the enormous increase in the number of operations peformed during the past two or three decades, it would be difficult to collate comparative statistics, based on either mortality or benefits, temporary or permanent.

It must be remembered that in proportion, both to the population and the diseases for which these procedures are undertaken, owing to the lack of comparative antecedent data, the ratio is hardly computable. Again, the operating surgeon loses sight of the vast majority of his surviving clientele, proclaiming his skill as an artist, the family attendant often being in possession of the suffering mortal remains that have been

accounted as surgical triumphs. Who knows the number of surgical neurasthenics, surviving legitimate or craftily devised operations? Who knows the number of deaths hastened by the exploratory or confirmatory incisors? Who knows the number so wrecked by the pretending sanguinary diagnostician, refusing a second but legitimate procedure to relieve them, after the error has been disclosed.

A very few of the many it has been my lot to witness will bear narration with benefit, I am sure, to the most competent surgeon, if only to remind him that surgery is a science as well as an art.

Within the past few months, an individual in the prime of life, began to complain in that region doing credit to the acumen of McBurney. Appearing at irregular intervals and declaring itself with greater or less severity, it did not always abide in that vicinity, but wandered toward the median line, and even downward along the genitals, sometimes appearing in the loin, and on one occasion being sufficiently intense to confine him to his bed. I had an opportunity of seeing him a number of times. He had some elevation of temperature and acceleration of pulse with diaphoresis warranting the presence of an inflammatory process. The loin and right lower abdominal quadrant were somewhat sore and tender to touch; meteorismus slight, and the other constitutional signs unimportant. Some two or three urinary examinations, among other things, always disclosed a few blood cells or shadows. Provisional diagnosis, either renal calculus or a local unilateral, interstitial inflammation. The possibility of tuberculosis was not excluded.

During an absence from the city, one or more of these attacks crippling the patient, a hasty diagnosis of appendicitis and an operation with negative findings was the result. To satisfy the inquiries of the patient and friends an indefinite accusation of the kidney was made.

Later examination by myself revealed continued presence of blood in the urine, often amounting to a macroscopic haematuria. Leucocytes were abundant. Cystoscopy disclosed a cystitis, probably due to catheter infection. One operation sufficed to cure the patient's belief in surgery and he must now relinquish the possible benefits to be derived from a second. There are other minutiæ, but I must waive the temptation of their recital for want of time.

The second instance of misapplied surgical art was in that of a tall as well as somewhat portly gentleman, weighing some two hundred and seventy pounds, in the prime and vigor of life. He had complained of an indefinite pain and distress in the right loin and hypochondrium. A very capable as well as distinguished operator felt convinced that a biliary calculus accounted for the disability. Operation failing to locate the offender, cholecystitis was made the scapegoat; the gall bladder was anchored and drained for a few weeks with negative results.

A carefully conducted inquiry and examination, made some few weeks later, removed the locus to the kidney as presumably at fault. Blood

cells and shadows, and later a genuine macroscopic hæmaturia, were the substantial witnesses.

Suggesting operation, the patient declined, the shock of the first having been sufficient to temporarily cure him of what he feared might become a habit.

A young neurasthenic, with all the stigmata to condemn him to the tender care of those especially interested, consulted me for an alleged uro-genital disorder. Some slight smarting, but no frequency was complained of. Careful inquiry failed to elicit the presence of a discharge, though it was assumed. Venereal history denied. Nothing abnormal in the urethra, epididymes, testes, cords or vesicles. The urine contained an excess of mucous and urethral epithelial elements and many oxalates. The first bacteriologic examination made without the precautionary balanic and preputial ablution, revealed the presence of a pseudo tubercle bacillus-smegna bacillus. This failed to appear, however, upon a subsequent perfected technique. The cystoscope failed to disclose anything abnormal, save an osteal ecchymosis about the right ureter, due to a previous catheterization. Yet, this case was condemned as tubercular. I might add that my negative finding was confirmed by several eminent specialists in this field.

A desire to impress patients with the importance of these preciser methods, coupled with a fondness for a vain display of the newer armamentarium, and an insufficient knowledge of its limitations, are the possible reasons for this error. It is needless to say that it meant the loss of no little reputation to the specialist.

A woman of forty-three, whose history was unimportant, save that she had been a parturient three or four times during twenty odd years of her married life. The first delivery was normal, resulting in the birth of a daughter, her only living offspring. The second was coupled with some difficulties, upon which I am not quite clear. The third, some nine or ten years ago, was a placenta previa, requiring hurried version. This was followed by eclampsia, loss of the child, laceration and retroversion with slight prolapse.

For this she was curetted. Later a trachelorraphy and an Alexander was done by an operator of national reputation. It might be added that, owing to the fetid discharge and menorrhagia, with the possibility of a final malignancy, the writer, wrongfully, as the sequel proved, suggested a hysterectomy, which was declined.

Some months ago I was called to see her in consultation with a young surgeon of reputation, if not eminence, in a large Eastern city. She was then in hospital, awaiting my consent to a hysterectomy for a supposed myoma, if not malignancy. There was a history of irregular menstruation of some months' duration, and gastric reflex disturbances. Despite the irregular molimen, there could be traced two distinct months of menstrual cessation. There was constant nausea, with vomiting after

the ingestion of food and a pronounced ptyalism. A physical examination revealed an enlarged but soft uterus, slightly retrodeviated. The cervix, however, did not present the customary softness of pregnancy. This was probably due to the cicatricial hardening and narrowing of the canal, following the trachelorraphy. So strongly was I impressed with a belief in her pregnancy, that I urged her immediate removal from the hospital. Since everything had been prepared for an operation, this was reluctantly consented to, much to the disgust of the nurses and the disappointment of the surgeon.

I suggested the counsel of a distinguished internist, asking that an analysis of the gastric contents be made. This gentleman reported a hyper-acidity, and gave it as his opinion that the stomach was reflexly disturbed, though he did not believe her to be pregnant.

Ten days after this I received another summons, the patient urgently demanding relief. She scorned the idea of gestation, which view was approvingly shared by the surgeon. I emphasized my conviction to the contrary, submitting under protest and thrust the responsibility upon patient and operator. They would not heed my counsel to await developments.

I had the pleasure of assisting in one of the most beautifully performed hysterectomies I have ever witnessed. The technique left nothing to be desired, so artistically was it done. Imagine my chagrin and the mortification of the operator when we discovered a three-months' fœtus in a healthy uterus!

Though the patient made an uneventful recovery we were guilty of an avoidable fœticide, and the mother deprived of a son, the possible hope and glory of her declining years.

These are only specimen copies of the recent past that could be duplicated almost ad infinitum. Nor does the writer claim that he has been entirely blameless. He, too, has fallen into the error that the knife is sometimes the only arbiter in the decision, but he does insist, never recklessly, pretentiously, nor with the hope of a reward beyond his legitimate due.

The reasons for these almost inexcusable blunders are not far to seek. The physician and surgeon is no better nor worse than other workers in the hive. His efforts and character are the reflexes of his era and environment.

In the fierce struggle for existence, reputation, renown and recompense so engross attention, that character becomes of either secondary importance or is altogether lost sight of. To achieve, to get there, is the motto, and the means are not always scrutinized with that care which integrity prompts.

Self-preservation is the first law of nature. A crowded profession and the necessity of a livelihood are the meager apologies for irregularities that are regarded as of slight importance.

The public admires the intuitive diagnostician. He is preferred to the conscientious plodder whose care and conservatism is often mistaken for ignorance. He who hesitates is lost. The patient is hurried off to the operating room lest a more active competitor get the victim.

Since time permits only a synoptical review of the purpose of this paper, I can merely suggest that much of this unnecessary surgery is avoidable. Instead, we should avail ourselves of those analytical means at our disposal by painstaking care and search. It is not expected that every operating surgeon should be a Leonardo da Vinci or a Michael Angelo—a universal genius. Such men are rare, and one in a generation or two would about fill the measure of our expectancy. This, too, corresponds with an historical rule. Few men can be great operators and great surgeons as well, and when finally modest enough to acknowledge this, they will call to their aid those skilled where they are deficient, those willing to make a reconnoissance where they are booted and spurred, restless for action.

The internist who is gradually being crowded from his legitimate sphere of activity by the claque and reclame of the machinery doctor, should be the collaborateur of the really skilled and conscientious operating surgeon, thus avoiding the snares and pitfalls into which the zealous too readily precipitate themselves.

Surgical trauma, even at the hands of the most skilled and where legitimately invoked, often results in shock, with subsequent neurasthenia, hysteria and a host of neuroses, as formidable as those induced by accident. The neurotic aftermath, often worse than the malady for which the surgeon intervened, may be months and years in disappearing. A sympathizing jury often indemnifies real or malingering neurasthenics when corporations are defendants. What if they should take a turn at the surgeons? I once heard a colleague, in discussion, justifying exploratory laparotomy by comparing it with a paring of the finger nails. What influence must such utterances exercise upon those just entering a chosen profession?

To my mind all operations undertaken hastily or recklessly, and without thoroughly canvassing the reasons for or against, or without an approximately certain diagnosis, are inexcusable makeshifts, stigmatizing the profession. This is especially true if the conditions are chronic. To make them substitute performances with a hope of gain, is damnable and little short of crime.

That explorations are often the only possible means of determining a condition not otherwise ascertainable we all admit; but the number could be enormously reduced if we employ our heads as well as our hands. If we would but put brains into our fingers, eyes and other senses, and were not itching for something brilliant to edify a credulous public.

Assuming that in the two instances first cited the operations undertaken were, in a sense, exploratory—and this is one of the devices screening diagnostic ignorance—were they not only negative but positively harmful?

These explorations should and could often be ante-operative affairs. The means are at hand. Post mortem pathology has logically accounted for many clinical contradictions.

Is it not about time that we acknowledge our pretended indebtedness to the ante-mortem surgical findings that have contributed to the sum of our knowledge?

In this way only can we escape the charge of being human vivisectionists instead of surgeons.

CLINICAL REPORTS.

A CASE OF PARATYPHOID INFECTION.

By Albert E. Taussig, M. D., of St. Louis.

The following case, while unfortunately not completely worked out, is suggestive from some points of view, and therefore, perhaps, worth reporting.

D. S., a Hindoo, twenty-five years old, came for treatment to the medical clinic of the Washington University Hospital on July 26, 1904. His family history was good in every way. He had never before had any illness of consequence, did not use alcohol, tobacco or drugs, and gave no history of venereal disease.

His present illness began two weeks ago with a feeling of general languor and malaise. This the patient attributed to constipation, and took a purgative. His bowels moved freely, but there was no improvement in his subjective discomfort. He had been sleeping poorly, suffered from nearly constant headache, and found himself growing constantly weaker. He believed that he had been having fever ever since the beginning of his illness. His appetite had remained fair, and he had had no particular abdominal discomfort. The bowels had been rather costive.

The patient was a small, sallow individual, showing considerable emaciation, face flushed, eyes dull, skin dry and hot, tongue coated, its margin indented by the teeth, the latter covered with sordes. His temperature was 101.4 , his pulse 80 when quiet, but becoming very rapid when the patient exerted himself a little. On physical examination nothing abnormal was found in the thorax. The abdomen was not distended or tender, no rose spots; the hard, smooth edge of the spleen could be felt on deep inspiration about 2 cm. below the costal margin. The urine was high colored, sp. gr. 1027, no albumen, diazo reaction negative. A Widal reaction done with the blood serum was negative. After two hours in the incubator at 37° C., there was firm clumping with loss of motion in a dilution of 1 to 20; most bacilli clumped but many still in motion in a dilution of 1 to 50, and only slight clumping at 1 to 100. There were at the time no cultures of paratyphoid at our disposal.

The patient was sent to St. Luke's Hospital and put to bed there. That same afternoon 8 c. c. of blood were sterilely aspirated from his cephalic vein and divided among three flasks containing 200 c. c. of bouillon each. In all these flasks a pure culture of a bacillus developed, the characters of which will be described below. As for the patient,

his temperature rose that evening to 103.6°, pulse 98, respiration 28. He was given an enema, a cool tub bath, was put on liquid diet, but given no medication. During the night his temperature gradually declined to normal, and remained there. His spleen was palpable for several days, but slowly receded to its normal size. No new pathologic signs or symptoms developed. He was discharged, well, on August 4.

The bacillus isolated from the blood was short with rounded ends, very slightly motile. It grew profusely on all ordinary media, the colonies on agar plates being round, bluish-white and elevated in the center. It coagulated milk in twenty-four hours with the formation of acid, caused the formation of gas in glucose agar, reduced neutral red agar, but did not produce indol in Dunham's peptone solution. Unfortunately press of work at the time prevented further study of the bacillus, and when it was taken up again all the cultures had died out. The same is true of agglutination tests made with the bacillus. Owing to a technical error, the results of agglutination experiments made on the bacillus with the patient's and other blood were negative. Before another blood sample could be obtained the patient had left the hospital.

Nevertheless, the morphological and cultural characteristics of the bacillus, as well as its source, all point towards its being a paratyphoid. Clinically the case was of the sort that all of us see with considerable frequency—cases that at first sight impress us as typhoids, but in whom the laboratory diagnosis contradicts the chemical one, and in which the rapid recovery, too, makes the diagnosis of typhoid fever untenable. It may be that more of these obscure febrile cases are paratyphoid than we might suspect.

TWO CASES OF INTESTINAL TOXEMIA.

By Alfred Friedlander, M. D. Cincinnati, Ohio.

At the present time the subject of intestinal toxemia is attracting a good deal of attention, largely from the view point of etiology. Our knowledge of the poisons which produce this condition is very incomplete as yet. There is still much difference of opinion as to whether the acid intoxication so commonly found in this condition is to be regarded as cause or effect. It is universally recognized, however, that this toxemia is exceedingly common in infancy and early childhood. From the clinical side the symptoms on the part of the nervous system are often very marked, and attention is frequently called to the fact that these nervous phenomena may vary in intensity from vertigo and headache to delirium, stupor or coma. As Rachford puts it, "The nervous symptoms which result from acute intestinal toxemia may vary in severity from slight fever, with exaggerated reflexes, to a high fever and convulsive disorder

so severe as to produce death." As illustrating this point, notes of two cases are appended.

Case 1.—F. S., male, æt. seven years, well developed and fairly well nourished. Family history negative. Both parents well, no neurotic tendencies. For about six months the child had had slight attacks of diarrhea, alternating with periods of constipation. Occasionally the child would be nauseated; would vomit once, and then be perfectly well again. Regulation of diet brought about decided improvement for about three months. In October, 1904, the child complained one evening of dizziness, vomited once and had a loose, offensive stool. Temperature 100° F., physical examination negative. Calomel, gr. 1, was given at once. The night was restless. Toward morning there were three evacuations of the bowels. In the morning temperature was 99°, child drowsy. All food except strained barley broth was interdicted, but the child refused even this, and took nothing but water. The evening temperature was 99°. The mother reported that the child "had slept most of the day." The child slept soundly all that night. Next morning the temperature was 97.6°. The boy lay in a condition of stupor from which he could with difficulty be roused. With the exception of a heavily coated tongue, offensive breath and slightly exaggerated reflexes, physical examination was negative. On this day the bowels were again moved thoroughly with broken doses of calomel. The urine which was scanty, contained neither albumen, sugar nor casts. Unfortunately, careful examination of the etherial sulphates was not made. The child took such food as was offered, principally cereal decoctions, but never manifested any desire for it. This condition of affairs lasted, without much variation, for five days thereafter. The temperature was at all times slightly subnormal. Minute doses of calomel secured daily bowel movements, usually offensive. On the sixth day the child could be aroused more easily, though when aroused he cried piteously and begged to be allowed to go to sleep. On the seventh day the mental condition became much clearer and the tongue had cleaned. Thereafter convalescence was rapid, the child regained his appetite and became perfectly normal again. He has been in excellent condition since the attack, though still on a carefully regulated diet.

Case 2.—C. F., female, æt. fourteen months. Well developed and nourished infant, breast fed up to the end of the first year. Weaning had been accomplished without difficulty, the child taking cow's milk and cereals, and there had been a steady gain in weight. In October, 1904, I was called to see the child one morning. The mother stated that it had been vomiting incessantly for twelve hours; that it had had no movement of the bowels for thirty-six hours. Temperature was 101°, abdomen retracted, examination otherwise negative. All food was stopped, and 1-20 grain doses of calomel given every hour. At the time of the evening visit it was reported that the vomiting had ceased. There

had been no movement of the bowels, however. Temperature at this time was 104°, pulse 110. Abdomen retracted. There was distinct rigidity of the neck muscles. Pupils contracted, but reacting sluggishly to light; nystagmus distinct. The child lay in a stupor. At times muscular twitchings of the extremities could be noted. The picture was that of a typical beginning meningitis. A high colonic flushing with warm saline solution was given, followed by a copious, very offensive stool. An ice cap was applied to the head and nape of the neck Twelve hours later the picture had changed completely. The temperature had fallen to 102, the child was distinctly brighter, but a complete left hemiplegia, arm and leg, had developed. The neck rigidity had disappeared; so, too, the nystagmus. Reflexes exaggerated on the affected side. In twenty-four hours the temperature was normal. Bowel movements were easily secured by calomel and enemata. The child now took food eagerly. In a week the paralysis of the lower extremity had disappeared completely; in two weeks that of the arm likewise. During this period the reflexes remained exaggerated. The electrical reactions in the affected extremities were normal throughout.

The child has been perfectly well since the attack.

22 West Seventh street.

CORRESPONDENCE.

EDITOR INTERSTATE MEDICAL JOURNAL, ST. LOUIS, MO.:

I have just read in the February number, with much interest, an article by Dr. Nathaniel Allison on osteotomy to correct "silver fork deformity" following fractures of the forearm.

I am glad to note the improvements of modern surgery, but am sorry to learn, incidentally, from the doctor's article and the discussion which followed, that a simple and definite method of treatment is not generally agreed upon. As long as there are so many ways of treating this fracture there will probably be a necessity for osteotomies to correct the resulting deformities. I think "an ounce of prevention is worth a pound of cure."

Hamilton indicates clearly the principles to be guided by, and the anatomy of the hand has not changed any since he wrote. I wish to give, for the benefit of the general practitioner, the young doctor and the country doctor, a simple, easy and effective way of applying these principles—a method I have used for many years to my satisfaction and comfort.

The articles necessary, and which I always keep on hand, are some flat slats about one-fourth of an inch thick, or smooth shingles without flaws or knots, and some pieces of cigar boxes, to make anterior and posterior splints for adults or children, some fine cotton batting and some adhesive plaster. These are the essentials. (I abstain from discussing diagnosis and reduction, and confine myself to retention.)

The patient, if unable to sit up, lies in bed with a board across the chest, with the injured arm lying on it with the thumb towards his head. If able to sit up, the patient does so on a seat so low that the axilla is even with the edge of a table on which the arm lies; the humerus horizontal, the elbow flexed, and the thumb pointing towards the patient. The other arm is now bared and laid on the slat or shingle from which the anterior splint is to be made, and an outline of it traced on the slat exactly the size and shape, from near the elbow to the ends of the fingers.

The posterior splint is to be about three-fourths of the length of the anterior, and should extend from the meta carpo phalangeal joints back. The width of the posterior splint must be marked off by the anterior one. The splints being turned over now are adapted to apply to the injured arm.

The surgeon who has handled the parts knows what the tendency to displacement will be. He sees or feels the deformity to be overcome, and whether or not the parts appear contented to stay in place, putting in some pads accordingly. If the arm is moderately fleshy and there appears no tendency to displacement, a uniform padding of a layer of cotton is sufficient. If there is a tendency to displacement, or the person is very thin, proper padding is necessary. I have often found it convenient, after making up the bed for the arm on the anterior splint,

to take a spool of thread and pass a few yards around it all, to keep the cotton and pads in place nicely while handling them.

Now lay the anterior splint down on the table by the side of the broken arm, raise the arm carefully and let some one slide the splint under, and let the arm down on it. Now lay the posterior splint on the arm and press down gently, and see that all is right. Use adhesive plaster in strips about an inch wide for adults, and about long enough to encircle the arm and lap two or three inches.

Raise the splint on which the arm rests sufficiently to slip a strip of plaster under at right angles to the splint, letting the middle of the strip stick to the anterior splint, and bring up the ends over the posterior splint, letting them lap well, the overlaps being on one side. Put on four or five of these strips, letting one come up between the thumb and forefinger. By this arrangement the strips get a firm hold on both splints, and fix them in parallel planes—a most important matter.

Since the splints are cut exactly the width of the arm, when they are pressed towards each other the soft parts bulge a little on each side and adhere to the strips. This holds all firm, keeps the splints parallel, and there is no possibility of displacement. Otherwise the splints have a tendency to form a V-shaped gutter, and we have no fixed point of resistance for pads. The pressure can be regulated by lifting and restricking the ends of the strips.

For my part, I would not dare to put up a fracture of this kind in any manner that would prevent my regulating the pressure during the first few days until swelling and subsidence had taken place, or in any way that would prevent my inspection at pleasure without displacing the bones.

By laying the arm on a table with the humerus horizontal, the overlapping ends of the strips can be lifted on one side and the posterior splint turned over to one side, exposing the arm, which lies passive on the anterior splint, to be inspected, gently rubbed or brushed or sponged off with alcohol, etc. Any tendency towards displacement can be detected and generally corrected by judicious padding. During the plastic stage this can often be accomplished beautifully.

I forgot to mention that at the end of about a week, when inflammation has subsided, I cut off the anterior splint even with the metacarpophalangeal articulation and let the fingers flex, but have passive extension practiced. Some plaster does not stick well and some slips in warm weather, so it is best to stick a pin in the lap.

Rolla, Missouri. R. L. JOHNSON, M. D.

[In the discussion of the paper on the "Silver Fork Deformity" the various methods of treatment of fresh Colles fracture were taken up. The writer of the paper stated that he was inclined to favor the long posterior splint recommended by Scudder. The anterior and posterior splints, as recommended by Dr. Johnson in the above communication, had strong support from some of the members, while others favored the pistol position. It was generally agreed that frequent observation and great care are necessary to success in these cases. The above letter gives in detail one of the methods of treatment which, when painstakingly carried out, will give good results. Apathy or carelessness in the treatment of Colles fracture is sure to produce a silver fork deformity.—ED.]

EDITORIAL COMMENT.

THE MEDICAL BOOK REVIEW.

Medical journals receive medical books from publishers for the avowed purpose of passing upon their merits in a critical fashion, or of pointing out their faults and weaknesses. Almost all medical journals have a department in which the opinions of its reviewers are set down for the guidance of its readers. How far this purpose is fulfilled may be an interesting inquiry. A glance through the columns of many weekly, and not a few monthly and special journals, reveals chiefly two things: first, that book reviews in medicine have nothing to do with any kind of critical examination; and, second, that all medical books are of necessity good books. In only two journals of a long list examined, was there any attempt to discriminate between the good and bad. It is obvious that the obligation which a journal assumes in receiving a book from the publishers is paid for in the coin of favorable comment. In other words, the book review is meant always to be a favorable notice, and whatever critical attitude the reviewer might have, must of necessity give way to the publishers' implied demand that the journal receiving the book must likewise advertise the book.

The tendency is so largely in evidence that it may be said with perfect justice that American Medical Journalism contains no channel through which the immense amount of new literature may be adequately commented upon. In a recent number of one of the most widely read weekly journals the book reviews were not only always fulsome, but with a stereotyped quality of fulsomeness that recalled nothing so much as the words of praise found on patent medicine circulars. As a matter of fact, it would be difficult to find anywhere so worthless a lot of books as were the object of so much appreciation.

It will be readily admitted that this sort of thing is more destructive than at first might seem apparent. To remove the only effective means of stemming the tide of useless and harmful literature is a responsibility which the editors of a medical journal cannot take altogether lightly. To praise an obviously bad piece of work harms the author as well as his readers. Multiply this tendency until it becomes a universal habit, and there will result just this: the book review department becomes a part of the advertising space, and it ought to be placed there. It is not less pernicious to praise a bad book than it is to praise an indifferent pharmaceutical preparation in the body of a journal. The one is not done by reputable physicians, the other is. Therein lies the difference.

The more widely a journal is read, the more carefully ought its book notices to be written. It is the general journal, after all, that must take

this task more seriously, and it is this kind of journal which at present most signally fails in its duty.

It should never be forgotten that there is a medical literature full of noble traditions, and as old almost as are the written records of mankind. May it not be that the decline in literary form so noticeable in recent years, is due to the lack of the necessary critical examination to which new books are submitted.

The poorly-written medical book, the one written obviously to sell, the one that plagiarizes another's work, the one containing verbose vaporings under the guise of special knowledge, the short-cut compend, the one filled with categories of unproved statements, and the one (so dear to the average book reviewer) which supplies pap to the much-nursed medical student, and the rest of that unseemly lot known so well to the long-suffering reader, should be treated as they deserve.

Then to a higher purpose must be cultivated the more temperate critical attitude which all books written in good faith deserve to find in their readers. Here the literary critic of medical literature will find his place, and will serve in a measure to fill the place which criticism fills in other literatures. To increase the body of good medical literature should be the sole aim of the medical writer. To aid in this purpose should be the office of the book reviewer. The first step to the latter purpose is a total change in the attitude assumed by medical journals towards new books.

THE CYSTIC DEGENERATION OF THE OVARIES IN CASES OF HYDATIFORM MOLE AND CHORION-EPITHELIOMA.

At post-mortem examinations of patients dying from chorion-epithelioma the ovaries have surprisingly often been found to contain smaller or larger cysts. Further investigations have revealed the fact—which, by the way, was occasionally mentioned by older writers on the subject—that such a cystic degeneration of the ovaries seems almost typical of hydatiform mole. This was, however, not so very surprising in view of the fact that chorion-epithelioma develops so often subsequent to a hydatid mole. More interest has been aroused by the observation of Stoeckel, who found that the epitheloid cells, which line these cysts, appear to be identical with lutein cells. A number of carefully prepared papers, mostly by German writers, followed the publication of Stoeckel. They all accepted his view, and soon it became generally recognized that the cysts so commonly found in the ovaries of cases of hydatiform mole and chorion-epithelioma respectively belong to the rather uncommon form of corpus luteum cysts.

This discovery was made at about the time when Fraenkel's ingenious theory concerning the function of the corpus luteum had proved a most fruitful field for scientific research. The possible importance of this

pathological alteration of the corpus luteum in the etiology of hydatid mole forms the subject matter of a large number of papers which have appeared within the last two years. Fraenkel himself thought that the transformation of the corpus luteum into a cyst must interfere with the physiological function of this body. He assumed that a deficiency of lutein substance prevents a normal development of the impregnated ovum. But very soon it was discovered that these ovaries do not show a deficiency, but, on the contrary, a very marked increase of lutein cells (Jaffe); and so Pick seemed well justified in forming a new theory. Accepting Fraenkel's claim that the corpus luteum exerts a regulating influence over the growth of the fertilized ovum, he contended that in the cases of hydatiform mole there exists primarily an abnormal augmentation of lutein substance which results in a pathologically increased stimulation of the growing ovum and causes its peculiar degeneration. Pick's theory seemed plausible enough, especially since subsequent investigations have proved the correctness of his observation concerning the actual hyperplasia of lutein substance.

A majority of recent writers had just begun to accept Pick's theory as an established fact, when two publications, one by J. Wallart (*Zeitschrift fuer Geb. und Gyn.*, vol. 53, p. 36), the other by L. Seitz (*Zentralbl. f. Gynaek.*, March 4, 1905), suddenly and unexpectedly disclosed the utter fallacy of this apparently satisfactory interpretation of the relation between lutein cysts and hydatiform mole. These two writers found—and there can hardly be any doubt concerning the reliability of their observations—that the hyperplasia of lutein substance and the formation of lutein cysts in atretic follicles are typical occurrences in the course of every normal and abnormal pregnancy.

Only one who has carefully watched the gynecological literature of the past few years, who has followed step by step the development of this complicated problem and has finally shared the enthusiasm of some of the writers in its happy solution, can appreciate the sad disappointment of seeing this debacle. All the painstaking work, all the ingenious thinking was in vain. The etiology of hydatiform mole is as dark as ever.

SPECIAL NUMBER OF THE LONDON "PRACTITIONER."

The March number of the *Practitioner*, a publication which enjoys a well-deserved reputation among all English-speaking physicians, appeared as a special number devoted entirely to a consideration of puerperal fever. Thirteen articles written by some of the best known obstetricians of England cover the subject in a very complete and satisfactory way. We refer the reader to the department of gynecology and obstetrics of this issue, which contains short abstracts of all these papers.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

Acute Dilatation of the Heart.—STARCK (*Muenchener Medizinische Wochenschrift*, No. 7, 1905).—The question as to whether the human heart can undergo an acute dilatation, and quickly return to its normal size, has been widely discussed of late, but no definite decision has been reached. That the heart can undergo gradual or sudden enlargement as a result of valvular lesions, or muscular involvement, and under proper hygienic and therapeutic measures return to its normal size has been determined without doubt. The view that it can enlarge and diminish in size within a few minutes or hours is as enthusiastically upheld by some as it is opposed by others. Schott conducted a series of experiments on bicycle riders in which he claims to have shown conclusively that such rapid changes can take place in the heart.

The writer reports a case of a student in whom a dilatation of the heart occurred during a duel, and within eight hours returned to its normal size. It is probable that the heart in this case had been greatly weakened by attacks of influenza, scarlatina and enteritis and had often been overtaxed through the exertion of bicycle rides, etc. The author believes that the psychic element played a great role in the production of the sudden cardiac changes. The patient had often undergone physical exertion as severe as on this occasion, but the same mental state did not exist.

The rapid return to the normal size is the point of chief interest in the case.

Albumosuria in Gastro-Intestinal Diseases, Especially Carcinoma.—URY and LILIENTHAL (*Archiv fuer Verdauungs-krankheiten*, Vol. xi, No. 1) find that in two-thirds of all carcinoma cases albumose occurs in the urine. The results of such examinations vary, however, in some cases at different times. In sixty-eight examinations thirty-eight positive reactions were found.

In occasional cases albumosuria is noted in benign gastro-intestinal diseases. In fifty-six examinations, seven cases were found.

The enterogenous albumosuria, in Maixner's sense of the term, seems very improbable. In order to explain the existence of albumosuria in carcinoma of the intestinal tract, the histogenetic origin must be taken into consideration. It must be remembered, however, that frequently in well-advanced degenerated carcinomata, albumosuria may be absent.

An undoubted diagnostic significance cannot be attributed to the albumose determination in the urine in carcinoma of the intestinal tract.

However, its presence upon repeated examinations, should greatly strengthen the probability of the existence of a malignant disease.

Frequent occurrence of albumosuria in febrile diseases seems very probable.

Copious Water-Drinking and Polyuria in Typhoid Fever.—CUSHING and CLARK (*American Journal of Medical Science*, February, 1905) find that large amounts of fluid are well borne by typhoid patients. They gave from a gallon to a gallon and a half of water through the day, giving four ounces every fifteen minutes. This was given in addition to milk and albumen water. This procedure was tried in a hundred cases and the results were compared with fifty cases in which it was not tried.

They maintain that the patients who received the large quantities of fluid were more comfortable, manifesting fewer toxic nervous symptoms. They maintain, too, that the severity of the disease, and the mortality are reduced in cases in which this method is employed hand-in-hand with the bath.

The Extraction of Foreign Bodies Through the Esophagoscope.—STARCK (*Muenchener Medizinische Wochenschrift*, No. 9, 1905), considers the esophagoscope the surest diagnostic means of determining the position of foreign bodies in the esophagus. The Roentgen rays and soundings are simply aids. The esophagoscope gives information as to the exact tophographical position of the foreign body and should be used as early as possible.

The surest and quickest removal of the bodies is through the esophagoscope—any other method of extraction, forcible sounding, any effort to push the object into the stomach must be avoided.

If the effort at extraction through the esophagoscope is not successful, then esophagotomie should be made if the object occupies a position in the upper part of the esophagus and gastrotomic if in the lower.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

The Special Field of Neurological Surgery.—CUSHING (*Bulletin of the Johns Hopkins Hospital*, March 5, 1905)—This article, in addition to being by a very well-known authority on the subject is probably the most comprehensive one of its kind which has appeared. The author gives a general review of the surgery which is applicable to the diseases of the nervous system and at the same time takes the most advanced views. It is encouraging to note that he is much more hopeful than were older authorities as regards the surgery of brain tumors. Indeed, where a radical cure may not be expected, still a palliative operation is strongly urged for the relief of symptoms and this is a matter which does not seem to impress itself strongly upon us. Great care is to be taken in

choosing the site of the opening; that is we must go down over and select a silent field of the cortex and thus avoid a paralysis or other complication. A skull defect underneath the temporal muscle and fascia is least likely to result in hernia. Subdural hemorrhages after fracture at the base are a most thankful field for surgery, as is proven by several interesting cases quoted. This same thought is applicable to new born children whose heads have been injured during delivery. None of the patients on whom Cushing has operated for apoplexy have been benefited, still he has hopes that a more liberal choice of cases may accomplish something in this line. Chloroform has no advantage over ether in brain work. There is less hemorrhages, it is true, but this is accomplished in just the same way as blood letting does it. Where a tumor of the spinal cord is inoperable, the patient may be saved untold suffering by simply dividing the cord an inch or two above the lesion.

Cushing's remarks on nerve suture are certainly most interesting. To him it seemed possible that our suture material may produce so much scar as to defeat the very end at which they are aimed. The entire article is a step in advance of anything in its line and deserves a reading in the original to be appreciated, since a review of so exhaustive a paper must certainly be inadequate.

The Contributions to Surgery of the Hepatic Duct.—QUENN (*Bulletins et Memoires de la Societe De Chirurgie*, Paris, March 7, 1905).—With the ingenuity of a Frenchman, this author made an anastomosis between the hepatic duct and the stomach. The patient, a woman of forty-three years, had been neurotic for about two years. There had been considerable colic in the upper portion of the abdomen at this time. When the abdomen was opened there was found a greatly indurated area in the head of the pancreas and the gall bladder was decidedly shrunken. The upper portion of the common duct and the hepatic duct were greatly distended and since there was no possibility of using the gall bladder for an external fistula, all that remained was to make the union between the hepatic duct and some adjacent hollow structure. The stomach presents the best chance for the work on account of its easy proximity, hence it was chosen. Two days later the patient died of pneumonia and at the autopsy the anastomosis was found to be perfect. There was no leakage and no peritonitis.

Results of 1500 Operations for a Radical Cure of Hernia in Children.—BULL and COLEY (*Medical Record*, March 18, 1905).—Lessons drawn from such an immense number of cases must be of undoubted value. In cases under four years of age operation is usually not advisable, since a majority of these patients can be cured by a truss. After this age an operation is almost always indicated, since there is practically no danger in it. It is no easier to cure hernia by operative means in children than in adults, and these authors have had a larger per cent. of recurrences in these cases where the cord was not transplanted. Hence, they strongly advise this step in the classical Bassini operation. They do not favor excision of veins. They say that recurrences, if seen at all, are usually in the first six months, and 90 per cent. occur during the first year, if at all. They use as a suture chromisized kangaroo tendons,

which resist absorption from four to six weeks. They emphasize very strongly the impropriety of using a nonabsorbent suture material.

Removal of Vermiform Appendix and Treatment of the Stump.—McLEAN (*The Journal of the Michigan State Medical Society*, March, 1905).—The technique exploited is the tying of a silk ligature around the appendix, and the insertion of a catgut purse-string suture back of this. After the organ has been removed it is tucked in, and the purse-string tied. Surgeons are divided on the question of using catgut or some nonabsorbable material for this purse-string suture. Hence, the insertion of the article which immediately follows this as illustrating the subject under discussion.

Care of the Stump in Appendicitis.—CORRUIN (*Colorado Medicine*, Vol. ii., No. 3).—An autopsy was performed on a patient upon whom an uncomplicated appendix operation had been done six days before. The patient did well for five days, when suddenly there was terrific pain, fever, etc., the patient dying twenty-four hours later. The appendix had been tied off with chromisized catgut, and the stump inverted by purse-string suture of the same material. At the autopsy it was found that the purse-string of catgut had given away, and the stump had slipped out of its new bed. Although the catgut ligature had held, the cause of death is sufficiently clear to need no comment. The reviewer is in possession of the histories of similar cases which can be cited for the benefit of those who prefer an absorbent purse-string on the appendix stump.

A Modification of the Bassini Hernia Operation.—POLYA (*Zentralblatt fuer Chirurgie*, No. 9, 1905).—The author's proposition consists in the following: The cord is brought out in the usual way at the upper end of the muscle opening, and then caused to turn upward instead of downward, and thus hook over a union of aponeurosis with Poupart's ligament. The internal oblique muscle and the lower portion of the rectus sheath, together with the upper flap of aponeurosis, are sutured to Poupart's ligament, the cord is laid upon the bed thus formed, and the lower aponeurosis flap made to overlap it.

Surgical Aspects of Major Neuralgia of the Trigeminal Nerve, with a Report of Twenty Cases of Operation on the Gasserian Ganglion.—HARVEY CUSHING (*Jour. of American Association*, Nos. 10, 11, 12, 13, 14, 1905).—Dr. Cushing once more lays great stress upon the complete removal of the ganglion, something which he was first to do several years ago. Since this is the only certain method of interrupting the sensory impulses, protection of the motor portion seems to Cushing the best reason for dividing the trigeminal root behind the ganglias if it is ever proven that this procedure offers complete relief from pain. Only one out of twenty-three cases has died at the Johns Hopkins Hospital where the Cushing method has been strictly followed, other operations having been attended by a high mortality. The zygoma should be removed after it has been divided, since this procedure minimizes the subsequent

scar. The well-known Cushing method of working beneath the artery certainly affords the easiest and shortest route to the ganglion. The paper is illustrated by photographs of patients taken after operation, showing the anesthetic area in each, as well as photographs of the ganglia illustrating the completeness of the work in each instance.

The post-operative complications are accorded the most exhaustive study, and among them the eye receives special consideration. In two of Dr. Cushing's series, enucleation of the eyeball seemed advisable, but still this cannot offset the relief from pain. The best protection for the eye is a Buller shield, which should be worn for some weeks after the operation.

DIAGNOSIS.

IN CHARGE OF

A. E. TAUSSIG, M. D.

The Diagnosis of Enlarged Bronchial Lymph Nodes.—ALFRED FRIEDLANDER (*Jour. A. M. A.*, No. 1, 1905).—Simple adenitis of the bronchial glands is very frequently only the precursor of the far more serious tuberculous involvement. It is not only true that tuberculous bronchial adenitis is present in at least four-fifths of all cases of tuberculosis in children, but—and this is the more important—it is certain that in the majority of these cases it is the primary lesion. There can be no doubt that many cases of enlarged bronchial glands tend to recovery without subsequent tuberculous infection. The danger of such infection, however, is always present and it is, after all, this factor which makes the condition so grave. Yet, even though it be admitted that tuberculous disease of these glands is enormously common, it is not to be forgotten that this form of tuberculosis, so long as it remains localized, is still decidedly amenable to treatment. Indeed, tuberculosis in infancy and childhood is essentially a disease of lymphatic structures. It may remain so localized for months or years before progressing to other and more incurable forms.

From the viewpoint of prophylaxis, as well as of direct therapy, it is thus very desirable that we should be able to make a definite diagnosis of enlargement of these nodes. While a positive diagnosis is not always possible, there are several symptoms—in some cases even definite physical signs—whose presence justifies the making of a diagnosis on the grounds of probability.

A peculiar paroxysmal cough, resembling that of pertussis, but without the crow, and coming on most frequently at night, is one of the early symptoms. Dyspnœa on slight exertion without demonstrable cardiac lesion, a capricious appetite, anemia without demonstrable cause, a slight afternoon rise of temperature, hoarseness more or less constant, are all suggestive of this affection. Physical examination is usually absolutely negative; when positive, the physical signs of enlarged bronchial nodes are, broadly stated, always those of compression. Dullness on percussion over the sternum behind the manubrium and the upper part of the

gladiolus and extending laterally to either side of the bone is a sign of value. An enlarged thymus produces a similar effect, but the dullness due to this cause rarely extends laterally beyond the margins of the sternum. On the other hand, even large masses of bronchial glands may fail to give rise of an abnormal percussion note. A marked difference between the breath sounds heard over the two lungs is also suggestive of bronchial adenitis. A venous hum, heard over the manubrium when the child's head is bent back, a disappearing as the head returns to the normal position, is very frequently met with when the bronchial nodes are enlarged, and much more rarely in other conditions. Of course, in very advanced stages of glandular enlargement other effects, due to pressure on the cervical veins, bronchi or recurrent laryngeal nerves, may be noted. But in these cases the tuberculous process is usually not limited to the glands themselves.

For the past few years the writer has been making systematic blood examinations in a series of cases of bronchial adenitis. In every case a differential leucocyte count showed a well-marked lymphocytosis. In this connection it must be remembered that normally the per cent. of lymphocytes in a child's blood is distinctly higher than in that of an adult. As the child grows older the proportion of lymphocytes to the other white corpuscles falls, so that in estimating the diagnostic importance of a lymphocytosis, the child's age must be taken into account. In every case examined by the author, the proportion of lymphocytes was much higher than would be normal for an individual of that age. He quotes two cases in which there was a marked fall in the per cent. of lymphocytes, apparently as the result of treatment. In one case, a girl of seven, the per cent. dropped from 64.4 to 48.8; in another, a boy of nine, from nearly 60 to 33.2 within seven months. The writer's cases were too few in number to justify any positive conclusions as to the diagnostic value in the condition of a relative lymphocytosis. His results, however, are suggestive and should lead to further investigation.

A Simple Test for Bile Pigment.—Wilhelm Presslich (*Muench. med. Wochenschr.*, No. 5, 1905).—The following test for bile pigment in the urine while not new in principle is simple and delicate, and perhaps deserves mention. If to a conical glass full of icteric urine a few drops of fuming nitric acid be added, the entire lower half of the fluid takes on a beautiful amethyst-green color. The writer has found that this reaction is still well marked when the amount of bile-pigment present is so small that neither Gmelin's test nor that with iodine are clearly positive. On the other hand, neither urobilin nor any of the other substances that may simulate bile pigment give the test. The test, it will be seen, is practically that of Hammarsten (addition of fresh aqua regia to the urine) but is somewhat simpler in execution.

The Laboratory Diagnosis in Diphtheria.—L. Schaps (*Arch. f. Kinderheilk.*, No. 2, 1905).—In a Dresden institution for the care of sucklings an epidemic of rhinitis with sero-hemorrhagic discharge, arose. In all these cases diphtheria bacilli were found in the nasal secretion. The same micro-organisms, however, were found in the nasal secretion of a large number of perfectly healthy babies, inmates of the institution.

Moreover, none of those with rhinitis showed any other sign pointing to diphtheria. In no case was any membrane, fever, paralysis or nephritis present. The bacilli were identified as those of Klebs-Loeffler by means of cultures, staining and animal inoculation. The writer concludes that the finding of diphtheria bacilli in an affection of the upper respiratory tract is by no means positive proof that the disease is really diphtheria. The clinical evidence must point the same way. This seems to be the view to which clinicians are coming more and more to adhere.

New Staining Methods for Tubercle Bacilli.—I. S. Wile; A. Gabrielides (*N. Y. Med. Jour.*, No. 4, 1905. *Grece Medicale*, iv, No. 23. *Abstr. Jour. A. M. A.*, No. 6, 1905).—Wile's method is as follows: The film is prepared and stained with carbolfuchsin in the usual way, but, instead of using Gabbet's solution, or decolorizing with acid alcohol and counterstaining with Bismarck brown, the smear is drained of excess of carbolfuchsin stain, washed in distilled water, and then plunged repeatedly into Labarraque's solution until the slide presents a uniform brown appearance. The slide is thoroughly washed in distilled water to remove an excess of hypochlorite solution, dried between blotting or filter papers, and examined with a 1-12 immersion lens. The tubercle bacilli appear as red rods on a brown field. Other bacterial forms, with the possible exception of the smegma and lepra bacilli, are brown in color—the red having been altered to brown by the action of Lebarraque's solution.

Gabrielides' technic allows the whole procedure to be done in less than thirty seconds. He modifies the Ziehl formula to the following: 1 gm. fuchsin, 10 c.c. of absolute alcohol, 5 gm. of phenic. acid and 40 c c. of distilled water. He dissolves the fuchsin in the alcohol and mixes the acid with the water, then combines the two and filters. Three drops of this mixture are added to the specimen of sputum, and it is heated for twelve seconds until it steams without burning. The slide is then rinsed and decolorized with 25 per cent. nitric acid in alcohol, rinsed again and stained in methylene blue. The nitric acid decolorizes instantaneously all the elements of the sputum except the bacilli, and the whole process is so rapid that fifteen seconds are ample for the heated sputa and thirty seconds when cold.

A Delicate Test for Bile Pigment in the Urine.—E. Riegler (*Rev. farmac.*, No. 3, 1904; *Muench. med. Wochenschr.*, No. 7, 1905).—As long ago as 1899, the writer published a very delicate test for bile-pigment, based upon the property of paradiazobenzene of giving to an alcohol-chloroform solution of bile pigment an intensely red color. Unfortunately, paradiazobenzene is a very unstable reagent, so that the test has not become generally useful. Recently, however, the writer has discovered that by using two solutions (as in Ehrlich's diazo reaction and in Fehling's solution) the reagent could be prepared fresh for each examination. Two solutions are required:

1. Dissolve 5 g. paranitroamidobenzene in 180 ccm. distilled water; add 25 ccm. pure sulphuric acid and mix.

2. Dissolve 2.5 g. sodium nitrate in 200 ccm. distilled water. Both solutions are stable and may be kept indefinitely.

The test is done as follows: Pour into a test-tube 4-5 ccm. chloroform,

fill up with urine and shake; allow the chloroform to settle and decant the urine; add as much 96 per cent. alcohol as there is chloroform, then five or six drops of each test solution and shake well. In the presence of bile pigment the urine takes on a deep red or orange color. The method is said to be more delicate and more reliable than that of Gmelin.

A Contribution to the Diagnosis of Renal Tuberculosis.—R. MILCHNER (*Berl. klin. Wochenschr.*, 1904, No. 49).—The following case is an example of the error to which the ordinary methods of staining tubercle bacilli may lead, especially if applied to the urine. The patient, a girl eleven years old, suffered from what was thought to be renal tuberculosis. She was emaciated and anemic; the left kidney was enlarged, palpable and tender; the urine was thick with pus, and contained bacilli that stained red with carbol-fuchsin and Gabbet's fluid. A ureteral catheterization showed the left kidney to be severely injured and to be secreting pus, whereas the right kidney was normal. A nephrectomy was done. At the operation, however, no tuberculous kidney but a hydropyonephrosis, with a kinked ureter, was found. The child recovered rapidly and completely.

The bacilli found were clearly smegma bacilli, for even after the operation they were found in the clear and normal urine as well as in the secretion between the labia. The writer comes to the conclusion that in urino-genital work it is necessary to do animal inoculation for the detection of tubercle bacilli, even if the staining method is positive. We cannot agree with this. If two precautions are taken no confusion between smegma and tubercle bacilli need ever arise:

1. The sediment stained should be that of urine obtained by catheter.
2. After having been decolorized, the spread should be placed for a minute in 95 per cent. alcohol. This decolorizes the smegma bacilli without affecting the tubercle bacilli. Gabbet's method should never be applied to urinary sediments.

THERAPEUTICS.

IN CHARGE OF

WALTER BAUMGARTEN, M. D.

Intravenous Injections of Sodium Salicylate.—F. MENDEL (*Muench. med. Wochenschr.*, January 24, 1905, p. 165) has made an extensive study of the intravenous administration of sodium salicylate, and is an ardent advocate of the method, both on account of its very rapid effect in acute rheumatic fever and forms of chronic rheumatism, and because it offers a means of accurately differentiating the arthritides of truly rheumatic origin from the tuberculous, gonorrheal and trophic forms. He summarizes his results in the following paragraphs:

1. The rheumatic pains and the effusions into the affected joints are removed promptly and certainly, even in the cases without fever.

2. The injections are efficient in cases in which both external and internal treatment have failed.

3. They are not followed by the systemic effects which are common after the administration of salicylates by mouth.

The solution used consists of—

℞ Sodium salicylate..... 8.75
Caffein..... 1.25
Aq. dist. 50.00

This is sterilized, and is to be used under strict aseptic precautions. The dose for adults is 2 c.c., repeated as necessary at intervals of twelve hours to three days. In very severe cases 4 c.c. may be given. The injection should be made into a vein of either arm or forearm, but never in the veins of the lower extremities, as these are likely to be in a less favorable state of nutrition and, therefore, more likely to become thrombosed. The wall of the vein is rendered tense by applying a tourniquet or pressure bandage at the central end by the extremity chosen for injection, enough pressure being made to obstruct the veins, but not the arterial flow.

Strict asepsis should be observed. Great care should be taken to expel all air from the syringe. Its needle, which must be sharp, should then be passed diagonally through the skin and the vessel wall in the direction of the blood stream. The bandage about the arm should then be loosened, and the solution slowly injected. With careful technique and thorough asepsis, Mendel states, the danger of thrombosis at the site of injection, and a possible embolus, is insignificant.

The Treatment of Epidemic Cerebro-Spinal Meningitis by Diphtheria Antitoxin.—WAITZFELDER (*Med. Record*, March 11, 1905, p. 361), acting on the assertion of Wolff, of Hartford, that the diptheria antitoxin is antagonistic to the growth of cultures of the diplococcus intracellularis meningitidis, and that marked improvement occurs in cases of cerebro-spinal meningitis after injections of diphtheria antitoxin, employed it in seventeen cases of this disease admitted during his service at the Gouverneur Hospital, New York. His observations are purely clinical. The results he has summarized as follows: Five patients completely recovered, three died, and nine are still under observation. Of the latter, five are rapidly recovering; the other four are in a serious condition. The previous mortality at the Gouverneur Hospital in the present epidemic had been 75 in 113 cases.

The antitoxin should be administered as early in the disease as possible, in doses of 6,000 units for children under five years, 8,000 for children between five and twelve years, and 10,000 units for adults, repeated daily until marked improvement in the symptoms is secured.

In addition to this, the author performed lumbar puncture in all cases where pressure symptoms developed.

Serum Therapy of Scarlet Fever.—W. KOLLY (*Djetskaja Medizina*, 1904, No. 3; *Muench. med. Wochenschr.*, 1905, No. 4, p. 195).—In the Morosow Children's Hospital in Moscow fourteen cases were treated by serum therapy, nine cases by Moser's serum, and five cases by a poly-

valent streptococcus serum. No difference was seen in the action of the two forms of serum. The cases selected were severe, and treatment was begun as early as possible. The majority received 200 c.c. of serum, 100 c.c. at a time. The results were surprisingly favorable; only one death occurred, and that in a case with coincident diphtheria. The first and most striking improvement occurred in the subjective condition, in the nervous symptoms, and in the return of sleep and appetite. In the majority of cases the temperature fell by crisis, without collapse or heart weakness. The pulse became stronger, the respirations less shallow. The eruption disappeared rapidly, but desquamation, when influenced at all, was prolonged. Nephritis developed in no case, and middle ear complications in only four.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

CARL FISCH, M. D.

Experimental Measles.—LUDWIG HECTOEN (*The Journ. of Infectious Diseases*, Vol. 2, No. 2).—Hectoen injected in two adults blood of patients suffering from measles. The blood was obtained with the necessary precautions, and added to about a tenfold quantity of an ascites-broth mixture: after incubation at 37° C. for twenty-four hours, a few cc. of the mixture were injected subcutaneously. After a period of incubation, lasting thirteen days in the one case, and eleven in the other, a typical attack of measles developed, but passed off without complications. The author concludes that the results of these two experiments permit the inference that the virus of measles is present in the blood of patients with typical measles sometimes at least during the first thirty hours of the eruption; furthermore, that the virus retains its virulence for at least twenty-four hours when such blood is inoculated into ascites broth and kept at 37° C. This demonstration shows that it is not difficult to obtain the virus of measles unmixed with other microbes and in such form that it may be studied by various methods. The microscopic and the bacteriologic examination of the blood-bouillon mixture were absolutely negative. In connection with this paper, the late publication of Ch. W. Duval (*Virch. Arch.*, Vol. 179, Heft 3), may be mentioned, which deals with the demonstration of the scarlet fever organism of Mallory in the contents of vesicles artificially produced after a very ingenious method in patients suffering with scarlatina. In this fluid Duval has found bodies resembling the formations described by Mallory in the skin of such patients. It is mentioned here as a very ingenious and perfectly harmless method of obtaining serum without the admixture of any cellular elements.

About the Cell-Inclusions Described as Protozoa and Found in Variola.—P. SCHRUMPF (*Virch. Arch.*, Vol. 179, Heft 3).—The object of Schrumpf's work was to inform himself about the nature of the bodies first found

by Guarnieri, then studied by many others, and most recently by Councilman and Bosc, who insisted on their having the typical morphologic qualities of protozoa, developing in a cycle analogous to that of these organisms and being the causative agent of variola. The methods of these authors excelled in perfectness and delicacy, and were as such taken as a confirmatory factor for the results obtained. Similar experiments were made with the study of the cancer parasite, where, too, only the finest histologic methods were said to be satisfactory for the demonstration of their presence and their characteristics. But soon we learned that the routine methods were just as satisfactory for this purpose, and that refined procedures did not show anything not discoverable by the others. Schrumpf, too, has used a very simple fixation and staining method, so simple and seemingly ineffective for the purpose, that to the preoccupied mind it at first causes a prejudice. That this is wrong is shown by his pictures which demonstrate the typical forms so well known from Councilman's and Bosc's work, but which are accompanied by a text that at least makes it unlikely that we have to deal in them with the pictures of protozoa or parasites. For certain stages the absolute certainty is arrived at that the objects found arise from protoplasmic and nuclear transformations, which makes the same more than likely for the others. To a large extent the work of the authors agrees fully with that published lately by Ewing, which must have been unknown to him, since he does not mention it. Like Ewing, Schrumpf also indicates the absolute lack of anything leading to a belief in a character of these bodies foreign to the tissue cells, and makes his objections against Councilman's explanation of the way of infection in variola.

Culture and Animal Experiments with the Bacillus Fusiformis and the Spirillum.—D. Veszpremi (*Centralbl. f. Bact. u. Inf. Krankh*, Vol. 38, Heft 2, Originale).—From a case of purulent periostitis of the upper jaw, that came to autopsy, Veszpremi inoculated some rabbits with success. One died of purulent peritonitis, in the exudate of which, besides other bacteria, many of the two bacteria of Vincent's angina were seen. Others, inoculated subcutaneously, within a few days developed gangrenous abscesses leading to the death of the animals. Cultures made from the post-mortem material remained negative. From the abscesses of the rabbits, however, the author succeeded in obtaining pure cultures of both forms that in their behavior are described. Rabbits inoculated with these cultures succumbed under the formation of abscesses, and from these again cultures were obtained. The investigations are not concluded as yet, but they have shown that the bacteria of Vincent's angina can be transferred from man to animal, that they produce in the latter the same pathologic condition as in man, that they can be cultivated on artificial media, and that they retain in cultures their original virulence. The paper is of exceeding interest, pathologically and clinically, as, in it, for the first time the direct proof is brought of the causative relation of the Vincent's bacteria to a clinically easily diagnosed condition, for which, so far, no pathologic or bacteriologic basis could be found except the constant superabundance of these micro-organisms in these cases.

The Behavior of Favus and Trichophyton Fungi in the Organism.—J. CITRON (*Zeitsch. J. Hyg. u. Inf. Krankh.*, Vol. 49, Heft 1).—Citron has found that intraperitoneal injection of these fungi causes the production of a pseudo-tuberculous process in the peritoneum and lymphatic glands. The fungi can be demonstrated in the tubercles for many months, and in mamalia there is no indication of phagocytic phenomena. The fungi are simply clumped together and surrounded by leucocytes. Phagocytosis is observed only in the frog, if the fungi are injected into a lymph sac. The injection into mice subcutaneously is followed by the typical disease, infiltration, scab formation, epilation and cicatrization, and for this it is immaterial whether living material or fungi, killed by heating, are used for the injection. Aside from the mechanical effect of the growth of the fungus on the tissues, we must figure with the action of an endotoxin that is present in the mycelium and is thermostabile. The unsatisfactory results of the antiseptic treatment of favus are thus explained, as the death of the fungus does not stop the irritation of the tissues exerted on them by the toxin present in it. A cure can only be achieved by a mechanical removal of the fungus itself. Intraperitoneal injections into mice, made with dead culture material, seemed to produce a certain resistance against subsequent infection. No passive immunization is possible; however, it can be shown that the formation of a specific precipitin is obtained in the course of active immunization.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Puerperal Fever.—(Special Number of *The Practitioner*, London, March, 1905.)—This number of *The Practitioner* is devoted to a very exhaustive and most interesting consideration of the question of puerperal fever in its various aspects. In the following we give brief abstracts of the thirteen papers.

I. *G. Ernest Herman* considers the *clinical aspects of puerperal fever*. He defines it as a disease which results from the inoculation of wounds with infectious germs. These wounds are on the vulva, in the vagina, or in the cervical canal, the writer apparently forgetting to mention the uterine cavity as a possible entrance into the system for pathogenic germs. The symptomatology of the disease is covered under the following headings: (1) Puerperal Ulcers, which often are called "diphtheric," although they have nothing to do with true diphtheria. (2) Hospital Gangrene, which at the present day is practically extinct. (3) Spreading Traumatic Gangrene, a still more formidable form of hospital gangrene. (4) Sapremia, defined by the writer as infection of the blood with toxins produced by saprophytic microbes. The characteristic feature of this disease is the effect of treatment. When the putrid lochia have been washed away, or the decomposing membrane or placenta been removed, rapid improvement at once follows. (5) Septi-

cemia may develop from sapremia, if left untreated. In this disease virulent bacteria enter the blood. Death usually occurs before the end of the third day. (6) Pyemia; this disease results from the entry into the blood of pus containing bacteria. The most characteristic feature of this form of puerperal infection is the development of metastatic abscesses, beginning from the sixth to the tenth day. Death usually occurs about the tenth or twelfth day, although some patients may linger on for six or seven weeks. Recovery occasionally occurs. (7) Peritonitis is one of the commonest forms of the disease. (8) Late Peritonitis; at times a focus of pus, situated either in the tube or in the peritoneum between adhesions, may, late in the lying-in period, rupture into the free peritoneal cavity. These cases often can be saved by prompt surgical interference. (9) Pelvic Cellulitis, which seldom proves fatal if treated properly.

[The author's classification varies considerably from that which is adopted by most of the modern writers. It is noteworthy that he does not accept septic endometritis and metritis as a special form, and nowhere mentions the very important symptom of subinvolution of the uterus accompanied by hemorrhages.—ED.]

II. *Alfred L. Galabin*, the obstetrician of Guy's Hospital in London, describes the modern *treatment of puerperal fever*. He lays special stress upon the microscopical examination of the contents of the uterine cavity, the result of which is of great practical importance for prognosis and treatment. A certain importance must be assigned to the smell of the lochial secretion. If the discharge is offensive, the affection is likely to be due to saprophytes; in very virulent forms of septic infections the discharge may be free from smell. The writer warns against the use of bichloride for uterine douching on account of the great danger of poisoning; he advises, however, on the next page, to use bichloride for the vaginal douche. He mentions in this connection that if a mercurial douche is employed daily, the patient should be given cathartics to secure regular, free action of the bowels. If in a case of fever, subsequent to childbirth, uterine douching is not followed by a prompt improvement, the uterine cavity should be explored at once. The examination is done with the finger, under anesthesia. This early exploration is, unfortunately, often omitted or delayed too long in private practice. Curetting as a routine measure increases rather than diminishes the mortality. Only in those very rare cases of abnormal adherence of the placenta a large, blunt flushing curette may be employed. In the absence of fetid discharge in streptococcic infection, repeated irrigation of the uterus seems contraindicated. It is of main importance to maintain the strength of the patient by abundance of liquid nourishment, given at short intervals. In very severe cases brandy will be useful The writer emphasizes the value of normal saline solution, given either *per rectum* or hypodermically. The effect of drugs is of less importance, and no drug should be given which is liable to interfere with the patient's appetite. Among medicinal antipyretics, quinine in full doses is the most valuable. Among other medications mention is made of the antistreptococcic serum, nuclein and collargol of Crede. Pus sacs demand operation immediately upon diagnosis. Very little can be ex-

pected from hysterectomy, which, so far, has proved a very dangerous operation.

III. In considering the *prevention of puerperal fever*, *D. Berry Hart* begins with the surprising statement that puerperal septicemia is not an *autogenetic* but a *heterogenetic* disease, that it is produced by germs introduced from without. The writer seems to be unwilling to accept the views of almost all modern investigators if he says: "No pathogenic germs are found in the healthy genital tract above the level of the hymen and external genitals." In Hart's opinion, as a rule the attendant is responsible for the infection, although personal habits and cleanliness of the patient are of some importance. The means of preventing puerperal septicemia are a general hygiene of the patient during pregnancy, a careful conduct of labor, in which judicious conservatism plays the most important role, and the repair of all lacerations. The author is in favor of one vaginal douche, with hot lysol solution given immediately after labor. Internal examination should be reduced to a minimum and should only be made with rubber gloves. Any man who attends obstetrical cases should handle septic surgical material only with rubber gloves.

IV. *C. J. Cullingworth* gives the *history of the Midwife Act of 1902*. This most important bill, which becomes operative on the first day of April of this year (1905), regulates the practice of midwifery in the United Kingdom. Hereafter the title midwife will be protected and can be used only by women who went through a prescribed training, passed an examination and have registered.

V. *J. Grey Clover* offers some *criticisms of said act*. Its object is to save the lives and health of poor lying-in women. But there is a possibility that as a consequence of this act it may become just as difficult for a poor woman to secure the services of a registered midwife as it is for her at the present day to have a trained hospital nurse or a medical man. A great number of the "untrained" midwives have intimated their intention of retiring from practice, thus the medical officer of one county reports that more than 59 per cent. of the midwives of his district prefer retirement to being supervised. There is danger of a deficiency in the necessary number of midwives. The midwives, according to the rules of this act, are compelled under certain conditions to call in a medical man; there are, however, no provisions made in the bill concerning the remuneration of physicians called upon to attend charity cases.

VI. *A. K. Gordon* gives his *impressions of puerperal septic disease in its more severe forms* as seen in the Isolation Hospital for the City of Manchester. The first thing that is apparent is the fact that the majority of these patients have been attended at the actual confinement by a neighbor, who calls herself and practices as a midwife. "Her practice is often extensive, her fee usually low; she is generally dirty, pig-headed and prematurely aged." The condition of the patient at admission is pitiful the majority being semi-comatose, with a high temperature. Sometimes they are delirious or maniacal; the breath has the sweet odor of septicemia. The abdomen is usually found distended, especially in cases where morphia has been given freely without any attempt at local treatment. The uterus is unduly large and through a dilated os a fetid purulent discharge issues. Generally there is a split cervix, frequently a

ruptured perineum. The writer classes his cases into three groups. In one variety there is a condition of acute septic intoxication, due to retention and decomposition of tissue. Only ten per cent. of his cases belonged to this group—all recovered. Then there is a group of cases of a more purely septicemic type, where nothing is found inside the uterus. Microscopical examination usually shows streptococci. To this variety belonged the majority of cases. Clinically, their condition has been of the typhoid type; about 20 per cent. of them recovered. The third group is formed by cases also of the septicemic type, but which are due to the bacterium coli commune. The prognosis in these cases is almost hopeless, more than half of them died. *This writer uses the curette in every case*, and he lays special stress upon the fact that he uses a "sharp curette, removing the endometrium down to the musle." He gives an injection of antistreptococcic serum in every case, without waiting for the result of the bacteriological examination.

VII. In an article on the *prevention of puerperal fever in London lying-in hospitals*, *William J. Gow* justly remarks that the efforts to prevent infection in labor can never be as perfect as in a case of surgical operation. The vulva skin cannot be sterilized, the duration of labor makes the risk of infection so much greater. Infection in labor can, therefore, not always be prevented. The keynote of all prophylaxis is the prevention of an introduction of infective material during ordinary examination, or during operative interference. No undue attempts should be made to hasten labor or the expulsion of the placenta. Perineal and other tears must be carefully sutured.

VIII. *E. Hastings Tweedy* describes the *asepsis of* the famous *Rotunda Hospital, of Dublin*, which was erected in the year 1765. One arrangement deserves to be especially mentioned. Each bed is numbered corresponding to one painted on the wall, and neither it or anything appertaining to that bed is permitted to be placed under any other number. Thus the hand basin, buttock basin, mackintoshes and night chamber are all numbered, the result being that a complete control can be kept of the spread of an infection.

IX. *Charles E. Paget* expects a noticeable *effect upon the prevalence of puerperal fever* from the *control of midwives*. Statistics show that the death rate per 1,000 registered births from puerperal septic diseases ranged from 3.0 to 1.4 in the various counties of England, a figure large enough to emphasize the importance of strong efforts towards reducing it. It has been estimated that 60 per cent., and in poorer districts even a larger proportion, of births are attended by women, who act as midwives. The fact that the new bill brings the midwife under supervision and forces her to call upon a physician in complicated cases will, in the writer's opinion, in due time show its marked influence in a reduction of the mortality rate.

X. *W. Williams* deals with *puerperal septicemia in its public health aspect*. Although puerperal septic diseases are essentially preventable, yet statistics prove conclusively that the mortality of them has not shared the diminution which has been observed in the case of other preventable diseases, such as smallpox, malaria, typhoid fever, etc. In comparing figures, the writer demonstrates the sad fact that for the last twenty years the improvement was practically nil as far as private prac-

tice is concerned, while in the same time the mortality from septicemia in well managed lying-in institutions has decreased almost to a vanishing point. In comparing the statistics of various counties the author can show that the mortality is the largest in districts where it is difficult to procure skilled assistance. He expects a decided change to the better from the new midwife act.

XI. *A. G. R. Foulerton* considers the *pathology of puerperal fevers*. He dwells upon the difficulty of a concise classification of puerperal fevers for clinical purposes or as a basis for treatment. He denounces the classification of older writers (which, however, is still advocated by some writers in this very number!) into sapremic, septicemic and pyemic types as of little practical value, since they represent only a superficial view of the exact pathological conditions. The processes concerned in the production of the symptoms of puerperal fevers may be schematically and generally represented as follows: (1) Infection of lacerations; (*a*) localized infection + toxemia; (*b*) localized infection + toxemia + generalized infection; or (2) primary infection of the contents of the uterus or of the placental site; (*a*) localized infection + toxemia; (*b*) localized infection + toxemia + generalized infection.

This scheme is, unfortunately, of but little assistance as a guide to treatment.

In studying the bacteriology of puerperal fevers the writer could prove the predominating importance of the streptococcus. Another result of his investigations differs conspicuously from generally accepted views; it is the author's claim that in a very large proportion of the cases the micrococcus pneumoniæ is the infective germ. He, furthermore, never found strictly anærobic bacteria. While the streptococcus is the commonest cause of primary infection of the puerperal uterus, bacterium coli and pyogenes albus are the bacteria most frequently met with as the presumably secondary elements of mixed puerperal infections. Obviously the author acknowledges the possibility of an auto-infection (which is denied by Hart in paper III of this number). But, while the author believes that the danger of auto-infection is a real one, he is extremely doubtful that anything can be achieved by vaginal douching. In the course of a consideration of the treatment of puerperal fevers he says: In cases in which there is an infection with streptococci, pneumococci or other bacteria which have a tendency to infect the tissues deeply, curetting is to be unreservedly condemned.

XII. The cytological and bacteriological *examination of the blood in puerperal fever* is, in the opinion of *W. D'Este Emery*, of rather limited value.

XIII. *J. B. Hellier* concludes this interesting number by quoting from a description of *an epidemic of puerperal fever almost a century ago*, reported by William Hey. The method of cure consists, in the opinion of this writer, in large evacuations by bleeding and purging. "They alone will be generally found sufficient if they are employed in a proper and seasonable manner."

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Concerning Aristochin in Pediatric Practice.—Aristochin (Di-chinin-carbonate) is said to contain 96.1 per cent. of quinine more than any other salt in use. It is absolutely tasteless and odorless, insoluble in water, but easily soluble in alcohol and chloroform. Deutsch (*Centralblatt f. Kinderheilk.* March, 1905), has collected from the literature various observations on the use of this drug in pediatric practice. In pertussis its use has been followed by excellent results. The dose should be somewhat larger than the dose of quinine would be, and its use is never followed by the symptoms of quinine intoxication. It has also been used with good effect in bronchial asthma and in angina In a series of cases of malaria, its use showed very good results, and very large doses were given without the production of any unpleasant symptoms. The author has also found it to be a very good, and not depressant antipyretic for children.

Comby (*Arch. de Med. des Enf.*, March, 1905), in an article on the treatment of intermittent fever in childhood, says that he has found aristochin of the greatest value in conditions where large doses of quinine were indicated. He regards the drug as being of particular value in pediatric practice.

Aural Affections in Children—Necessity for Their Early Recognition by the General Practitioner.—JARECKY (*Med. News*, March 18, 1905), says that no examination for any inflammatory condition in childhood should be considered complete until the ears have been looked at. Very frequently the seat of trouble will be found to be here, and the early recognition may greatly facilitate the treatment. In the exanthemata, especially in scarlet, repeated examinations should be made. Any unexpected or continued febrile movement during any acute disease, or any unusual restlessness, should attract attention to the ears.

Pathological conditions in the nose, throat and mouth often cause ear trouble secondarily, and these conditions, therefore, demand careful attention. The author's hospital records show that 33 per cent. of the ear patients were children under fourteen years of age, half of whom were suffering from suppurative ear troubles. Of the adults, 25 per cent. were suffering from ear trouble contracted during childhood. The author concludes that:

Early recognition of an ear trouble may prevent pus formation, which proceeds rapidly in children. If pus has formed, attention to it may prevent its toxic absorption. Early paracentesis may prevent a whole train of complications, often very serious.

Partially deaf children should have the nose and throat examined and pathological conditions removed.

In all inflammatory conditions children's ears should be repeatedly examined during the course of the affection.

Results of Fifteen Hundred Operations for the Radical Cure of Hernia in Children.—W. T. BULL and W. B. COLEY (*Med. Record*, March 18, 1905).—From 1890 to 1904, there were treated at the Out-patient Department of the Hospital for Ruptured and Crippled, 53,686 patients with inguinal and femoral hernia. Of these, 15,375 were children under fourteen years of age.

From December, 1891, to October, 1904, 1,500 operations have been done for the radical cure of hernia, all but twenty of them on children under fourteen years of age. With certain exceptions, all children with hernia are treated for one or two years with a truss before advising operation. If at the end of this period no improvement is manifest, the operation is advised. The operation is advised, furthermore, when the following conditions exist, without reference to truss treatment:

1. Cases of strangulated hernia, or cases in which strangulation has occurred or reduction has been effected by taxis.
2. Cases of hernia with reducible hydrocele, or fluid in the hernial sac.
3. Cases of irreducible hernia (rare in children).
4. Cases of femoral hernia, which are practically incurable by truss treatment.

In cases under four years of age, operation is seldom advised, since the chances of cure by truss treatment are far greater in young infants.

While it is true that many cases give a history of relapse after apparent cure by truss treatment, it is also true that about two-thirds of infants under two or three years are cured by truss treatment.

The authors then enter upon a detailed discussion of the various types of hernia encountered and the various operations performed. For these details, the original article must be consulted. It may be noted that of the 1,500 operations there have been six relapses after 1,076 Bassini operations, and five relapses in 125 operations in which the cord was not transplanted. In the series of 1,500 cases, there were four deaths, a mortality of less than three-tenths of 1 per cent. One of the writers has operated upon 800 consecutive cases without a single death.

ORTHOPEDICS.

IN CHARGE OF

NATHANIEL ALLISON, M. D.

A Clinical Report of Seventy-five Cases of Arthritis Deformans (Chronic Non-Tubercular Arthritis).—F. L. RICHARDSON, M. D., Boston (*Boston Med. and Sur. Jour.*, March 9, 1905).—The writer states that it was found difficult to apply the terminology used by Goldthwaite, Painter, Garrod and Pribram to many of his cases. He has decided, therefore, to use the term "Arthritis Deformans," first used by Virchow, and lately by McCrea, Walsh, Skinner and Tinker, as it does not assume either clinical or pathological distinctions which have not been accepted by all writers. Occupation, conjugal condition and family history were inves-

tigated, and were not found to bear any definite relationship to the affection. Past history of the cases showed that five cases gave a history of acute rheumatism, in sixteen cases arthritis began while there was a gonorrheal discharge; in only four cases was there any history of syphilis. The age of onset was in the greater number of cases before the sixtieth year, the majority being before the age of fifty. The first joint involved was, in twenty-five cases, the knee; in ten, the spine; in fifteen, the wrist and hand; in six, the ankles and feet, the remainder being scattered. Examination of the blood revealed nothing; of the urine, showed that in no case was the uric acid increased, while in many it was relatively diminished. Clinically, the writer, divides the cases into two classes, and states that many of his cases have shown the clinical signs of both.

Group 1.—The cases here are, for the most part, relatively young in years; the first attack of the disease is fairly acute or sub-acute; there is swelling, redness, and at times increased surface temperature, tenderness and pain on motion. Effusion into the joint is not uncommon. The joint shows a fusiform enlargement, which does not seem to be in the bone. Recurrences are not uncommon at intervals of from a few weeks to two years. The joint or joints affected with this disease are permanently injured, and usually there is some, if but little, deformity remaining. The fact that pain in the acute attack is often relieved by salicylates, has led to the confusion of this disease with acute articular rheumatism, salicylates do not tend to lessen the length of the attack or to reduce the deformity.

Group 2.—The cases in this group show crippling of the affected joint with marked deformity of the articular surfaces and new formation of bone, the cases are usually "physiologically old." Heberden's nodes and spondylitis deformans are types of this group. The onset here is insidious, the patient not being aware of the condition till some slight accident calls his attention to the joint. The knee is most frequently involved by this disease, synovial fringes may frequently be felt. In advanced cases there is marked muscular atrophy. Treatment for both classes consists in good hygiene, both local and general. Good, easily digested food in sufficient quantity is essential. It does not seem advisable to cut off any particular class of food stuffs. Drugs appear to have no effect on the course of the disease. The paper is summarized with the statement that we know little of the varied conditions that give rise to the disease, but that as Bradford has suggested there seems to be a close analogy between arthritis deformans and arteriosclerosis. That the disease is the result of some general alteration in the body metabolism seems possible. The history of several of the cases is given in detail, and the paper is illustrated by skiagrams and photographs which show typical lesions.

Cicatricial Contraction of the Hand—Transplantation of Abdominal Flap—Relief.—JAMES S. STONE, M. D., Boston, (*Boston Med. and Surg. Jour.*, March 2, 1905).—The patient in the case reported had her hand caught in a mangle, palm down, against a hot drum; it was held there till the machinery could be stopped, about a minute. The skin of the palm peeled off at the time, adhering to the drum. One year after the wound

was healed and the scar so contracted that the fingers were all tangled together in complete flexion. The operation was to denude the palm of scar tissue, forcibly correct the flexion of the fingers, then to stitch on to the area a flap of skin and subcutaneous tissue dissected from the abdomen directly over the appendix region. The upper and inner edges of this flap were not separated, but the hand was placed under it, palm upward. Sutures were taken and the hand secured in place by a plaster of paris bandage, which encircled the pelvis and abdomen. After seventeen days under an anæsthetic the dressing was removed and the upper and inner border of the flap were cut free. Healing followed with but little sloughing. The hand was kept on a splint for several months. As a result some motion was attained and sensation returned to the transplanted flap.

An Improved X-Ray for the Study of Bone Injuries and Foreign Bodies.—G. H. STOVER, M. D. Denver, (*Jour. Amer. Med. Ass.*, March 25, 1905).—The difficulty of locating a foreign body accurately, as well as the uncertainty experienced in determining the direction of displaced fragments in cases of fracture, are matters of everyday experience. The author shows that in order to be at all accurate the skiagraph must be used. The fluoroscope is a rough and inexact method, and should not be relied upon. His object is to overcome some of the difficulties met with when a sensitive plate is used, and a permanent record of the condition obtained. He describes a method for taking a stereoscopic skiagram. A plate holder is placed under the part to be taken; this plate holder is so constructed that a plate in its light proof envelope can be put in and taken out of it without disturbing the patient. The tube is now placed so that its anode is to one side of a perpendicular drawn through the centre of the part to be taken, the first plate is exposed. A new plate is now placed in the holder, the anode is moved to the same relative position on the other side of the perpendicular, and the second plate exposed. These two finished plates are now placed side by side and observed through a special stereoscope. The effect so well known, which is produced by the ordinary parlor stereoscope, is now obtained. The value of the method is shown in several illustrations.

The Technique, Value and Indications for Portable Apparatus Made of Celluloid in Orthopedic Surgery.—Dr. J. D. GHIULAMILA of Bucarest (*Revue D'Orthopedie*, March, 1905).—The simplicity with which celluloid apparatus may be made, its lightness, durability, cleanliness and comparative inexpensiveness, all recommend it to use. There are several methods of making the apparatus; one is to use sheets of celluloid; soften these in alcohol and apply them to a cast or positive of the part made of plaster of paris; another method is to apply bandages soaked in a solution of celluloid in acetone. The best method is to take a careful negative of the trunk or limb, make from this a positive cast, then on this cast paint the solution of celluloid on layers of light cloth evenly applied; when dry this is cut off, trimmed to suit, the edges bound, and a perfectly fitting splint or jacket is obtained. These appliances will not absorb water, nor do they rust or tarnish. Hoffa of Berlin has used

this method, as has also Lorenz; Bradford of Boston has employed it for some time with greatest satisfaction.

Partial Separation of the Tibial Tubercle.—G. A. WOLLENBERG (*Deut. med. Woch.*, October 20, 1904).—A case is reported of a man of twenty-three years, who, by a forcible contraction of his quadriceps, ruptured his tibial tubercle. The usual history in these cases is direct violence, often slight. The condition may result from indirect violence, however, as in the case reported. Miller and Schlatter each reported eight cases, from these it would seem that the persons affected are males between the ages of twelve and seventeen; the injury is usually an avulsion of the "beak-shaped" process of the upper tibial epiphysis. In adults the condition is rare, and is a separation of the spine of the tibia; the nearer the individual is to the age when the tubercle of the tibia begins to develop the more easily will only the tip be affected. At the commencement of union between the epiphysis and diaphysis the lesion seems most apt to occur. Prognosis is favorable. Protection and the application of adhesive straps to bring down the "beak-shaped" process is sufficient treatment in most cases. Where the separation is complete, operation is to be considered. After union massage and gymnastics will quickly remove any disability.

Treatment of Stiff Shoulders.—A. SCHANZ (*Archiv. f. Ortho.*, Band 11, Heft 3).—There seems to be a special tendency on the part of the shoulder joint to immobility. This may be accounted for by the fact that the shoulder can be protected from trauma by the ability the patient has to fix the joint and move the scapula. Massage and gentle passive motion will do much for these shoulders. It is better, however, to give an anæsthetic, place the humerus in abduction forcibly and then begin the mobilizing treatment.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

Locomotor Ataxia Successfully Treated with Ultra-Violet Rays.—LIEBERMANN (*New York Med. Jour.*, February 18, 1905).—Attention is called to this article because its publication in a well recognized medical journal might lead the reader to believe that it contained facts which merit publicity. That such is not the case will be apparent to anyone who reads the paper with any sort of discrimination. In the first place, the diagnosis of the cases reported are open to the gravest doubt, and as one reads further and finds that the author's ideas of the pathology of the disease are as hazy and as ill-founded as his diagnosis, one is filled with wonder that such a paper appeared in the journal mentioned. A man who writes on tabes at the present time owes it to his readers, if not to his own conscience, to be at least sincere, for it would be an in-

sult to anyone's intelligence to think that all the misstatements in this article are due to the author's ignorance of the subject he is attempting to write about.

A Case of Myasthenia Gravis, with Autopsy.—BURR (*Journal Nerv. Ment. Diseases*, March, 1905).—This adds one more case to the slowly growing material of autopsy examinations in this disease. The case is interesting, likewise, because it exhibited visual symptoms most frequently found in hysteria and regarded as pathognomic of this disease, namely, contraction of the fields of vision, partial reversal of the red and blue fields and later color confusion. The case otherwise was typical enough. The autopsy showed, beyond an enlarged thymus gland, no pathologic condition of the internal organs. The lesions found in the nervous and muscular systems were perivascular accumulations of free blood cells in the region of the red nucleus and lymphoid infiltration of the muscles. The persistent thymus and the lymphoid infiltration of the muscles are the most consistent lesions found. The changes in the nervous system are not sufficient to explain the symptoms.

The Prognosis of Disseminated Sclerosis.—BRAMWELL (*Rev. Neurology and Psychiatry*, March, 1905).—In as much as disseminated sclerosis is an incurable disease it might be of some interest to find out the duration of the process and what the results of treatment have been. No particular effort has been made to do this before this paper appeared. Bramwell has tabulated the results in this respect of his large personal material, amounting to 110 cases, with the following results: The average duration of the disease in this material is ten years and five months, 35 cases have died, 61 are living, of these 33 are worse, 16 are about the same, 8 are improved and 4 are quite well. Tables are given showing the total duration of the disease in 96 cases and the exact duration in 35 fatal cases. The histories of 4 cases are quoted in which recovery or complete disappearance of symptoms took place for so long a time as to suggest apparent recovery.

Vitiligo and Tumor of the Central Canal of the Cord.—FERRIO (*Rev. Neurologique*, 1905).—This is an interesting observation of a case of vitiligo in a man twenty-nine years old. At the autopsy there was found a tumor occupying the central canal and completely obliterating it. The tumor was a glioma, and did not penetrate into the white substance of the cord at all. While the author is not sure that this was the cause of the vitiligo, its occurrence in this case is extremely suggestive, and he calls attention to the lack of neurological examination in those cases with skin affections of an obviously nervous origin.

Tabes Dorsalis and Psychosis.—BORNSTEIN (*Monat. f. Psych. und Neurologie*, Band 17).—Westphal was the first who brought out the fact of the possible relation of psychoses in the course of tabes as something that might be considered more than a mere coincidence. The relation that exists between tabes and general paralysis has, of course, long been recognized, so that a special term known as tabo-paralysis has been

given to the combination of the two conditions. There is, however, no doubt that there are found mental disturbances in the course of a tabes which have nothing in common with that seen in dementia paralytica. Two cases are here described as a contribution to the subject, and the author concludes as follows: (1) There is not sufficient ground for the assumption that there exists a special tabes psychosis. (2) The largest number of psychical disturbances found in tabes are anomalies of the special senses in the form of hallucinations. (3) The psychical disturbances in tabes should not be looked upon as accidental complication of the disease. (4) The hallucinations are probably due to atrophy of the optic nerve or to sensory disturbances. (5) In cases of tabes in which there is no disposition to psychosis the mental disturbances limit themselves usually to hallucinations without any further psychical disturbances; in those with a hereditary history of mental disease there can develop the most varied psychoses upon the basis of the tabes.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Anatomy of the Vesical Trigone.—UTEAU (*Ann. des Mal. des Org. Urin.*, February 15, 1905).—From examination of 150 fresh bladders the author finds that the measurements of the normal adult trigone usually given are too small. While distention of the bladder increases the area of the trigone, especially in women, contraction of the bladder diminishes it, especially in men. Hypertrophied prostates do not of themselves increase the dimensions of the sides of the triangle, although they often deform the prostatic urethra and vesical floor. Uterine retroversion alters considerably the inter-ureteric distance, and to a less degree the sides of the triangle in women. As a rule, pathological conditions do not alter the extent of the triangle. Anatomical anomalies are not rare in the bladder. While doing cystoscopy we should expect to meet them, and it is very important that we should not allow ourselves to be misled by them.

A New Test for Detecting Minute Quantities of Albumen in Urine—Demonstration with Two Specimens.—RAVOLD (*Jour. Mo. State Med. Asso* , April, 1905).—This test, known as the Spiegler-Jolles, is made up as follows: Corrosive sublimate, 10 gm.; succinic acid, 20 gm.; sodium chloride, 20 gm.; Water, 500 c. c. Dissolve with heat.

Ravold, finding that this solution was not of sufficient specific gravity to allow one to float upon it urine of high specific gravity without mixing, has overcome this difficulty through the addition of sulphate of magnesium, the method of preparation being as follows: Corrosive sublimate, 2 gm.; succinic acid, 4 gm.; common salt, 4 gm.; water, 50 c. c. Heat. This is added to 50 c. c. of a saturated solution of sulphate of magnesium.

The manner of testing a specimen of urine for albumen is as follows:

The urine is first acidified by adding 1 c. c. of acetic acid to 5 c. c. of urine; filter. Then, by the aid of a pipette, the urine is slowly floated down upon the surface of the reagent in an inclined test tube. If a ring of albumen appears, then heat. The albumen will not disappear. Further examination should be made for globulin, nucleo-albumen or mucin and the albumoses. This test is ten times as delicate as the nitric acid.

Total Enucleation of the Prostate in Advanced Old Age.—FREYER (*Lancet*, London, February 25, 1905).—Out of 134 cases of prostatectomy seven were octogenarians and one was seventy-nine years of age. Of these eight old men seven recovered, and one, having cancer of the prostate, died of heart failure, after recovery from operation. Such recoveries go to show that age is no contraindication to prostatectomy. It is the general condition, and especially the state of the kidneys, that must furnish a guide for operation.

General Gonococcal Infection.—WYNN (*Lancet*, London, February 11, 1905).—Three cases, with autopsy findings are reported, gonococci being demonstrated in the joints, lungs and on the valves of the heart. Enough evidence has accumulated to show that the lesions and symptoms of the general infection depend mainly upon these factors, viz.: (1) Direct infection with the gonococcus itself; (2) an absorption of a toxin, gonotoxin; and (3) mixed infection with other germs. There is now definite evidence that gonococci can circulate in the blood and produce the lesions found in the various organs; there is a true invasion by the organisms.

Such cases show the need for routine examination of the urinary organs, and especially of the prostate, in all cases of pyæmia of obscure causation, just as the middle ear is now always examined in similar cases. Gonococcal infection has no special clinical features which may differentiate it from other pyæmias, and a positive diagnosis can only be made by a bacteriological examination of the blood or any accessible lesions. Stained films of the blood are not sufficient; cultures must be made.

Some Cases of Urethral Stricture Complicated with Prostatic False Route or Passage, with Remarks.—REGINALD HARRISON (*Lancet*, London, February 18, 1905).—Here are given the histories of several cases of urethral stricture in which a false passage was made from the bulbomembranous junction to the bladder, the urine drawn and subsequently voluntarily passed through this false passage, the patients doing fairly well. The last case occurred in the practice of the writer, and came to him after the false passage had been made. He, however, discovered the true urethral opening, which only admitted a filiform, and by doing an internal urethrotomy with a Maisson neuve urethrotone and supplementing this with an external perineal urethrotomy, finally established the natural channel and cured the patient.

Clinical Examination of the Urine.—CABOT (*Jour. A. M. A.*, March 25, 1905).—After an elaborate exposition of the subject the following summary and conclusions are presented:

1. There are many cases of acute glomerular nephritis which cannot be recognized by any of the methods of examinations known to us.

2. In some cases of subacute and chronic glomerular nephritis our diagnostic resources are likewise at fault, but in the great majority of cases here studied the condition of the urine, taken in connection with other features of the clinical picture, enabled us to anticipate the autopsy findings. Our success in the diagnosis of chronic glomerular nephritis is almost as constant as our failure in the acute cases.

3. When we face the group of chronic interstitial cases, our diagnostic resources appear to be neither as sufficient as in chronic glomerular nephritis nor as inadequate as they were shown to be in the acute cases. In about one-third of the cases the diagnosis was correctly made before death.

4. Among other conditions mistaken for nephritis, owing to the implicit reliance in the urinary findings, we find that the senile and arteriosclerotic degenerations are not infrequently the cause of mistaken diagnosis of chronic nephritis, while in conditions involving passive congestion or acute degeneration of the kidney the urine occasionally simulates that of acute nephritis. Even in cases where no lesions are to be found at autopsy, the urine is occasionally highly albuminous and full of casts.

5. In our ordinary examinations common errors are: (*a*) The attempt to estimate urea without any accurate knowledge of the patient's metabolism; (*b*) the statement that renal cells are present when all that we know is that we have seen small mononuclear cells, perhaps belonging to the renal tubules, perhaps not.

6. Cryoscopy and other attempts to test more directly the renal permeability are not as yet capable of supplementing in clinical work the older method of examination in the diagnosis of nephritis.

The vast majority of estimations of urinary solids, including urea, are, in my opinion, a waste of time, since they are not and in most cases cannot be made part of a general metabolism experiment. The attempt to estimate the anatomic condition of the kidney by the measurement of albumen and the search for casts is fallacious in the extreme. The most reliable data about urine are those most simply and quickly obtained—the twenty-four hour quantity, the specific gravity and the color.

Report on Operative Work in the Ureter Through the Author's Catheterizing and Operative Cystoscopes.—LEWIS (*The Lancet-Clinic*, March 4, 1905).—The author describes the uses and methods of manipulating his instrument and his operative work upon the lower end of the ureter, such as the removal of stones, cutting and dilating strictures. A number of interesting cases are reported, and the instruments are illustrated.

LARYNGOLOGY AND OTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

The Nose, Pharynx and Larynx in Hemoptysis, Pharyngitis Hemorrhagica.—PREOBRASHENSKY (*Archiv fuer Laryngologie und Rhinologie*, Band 17, Heft 1).—The author wishes to emphasize the fact that the lungs are not always at fault where there is an expectoration of blood. He points out that the blood, even when expectorated in considerable amounts, may come from the nose, pharynx or larnyx. After reviewing the literature on the reported cases of hemoptysis having their origin in the upper respiratory passages, he reports sixteen cases of his own. In eleven of these the bleeding came from the pharynx and nasopharynx. In three of the cases the hemorrhage had its origin in the larynx, while in the remaining two the bleeding he believed to come from the trachea. In all of the cases prompt recovery followed the employment of local treatment. Preobrashensky concludes as follows: 1. That the origin of hemoptysis is more frequent in the upper air passages than is commonly believed. 2. Most often the bleeding has its origin from some localized inflammatory area, or from a dilated vein. 3. That when a proper diagnosis is made the hemoptysis can be, as a rule, permanently cured 4. The quantity of blood cannot be taken as a criterion as to its origin, as profuse bleeding may come from the pharynx. 5. The term hemorrhagic pharyngitis should be accepted as well as hemorrhagic laryngitis.

Cure of Two Cases of Bilateral Exophthalmus and One of Chorea by Removal of Adenoids.—HOLZ (*Berliner Klinische Wochenschrift*, January 23, 1905) reports two cases of Basedow's disease in which the diagnosis was based mainly upon the exophthalmus. He believes that the diagnosis of Basedow's disease can be made on the exophthalmus alone, when other causes for the latter can be excluded. In the first case reported by the author the exophthalmus disappeared after the removal of adenoids, recurred with reappearance of the growths and disappeared again after their second removal. In the second case the removal of the tonsils had no effect upon the exophthalmus, but the removal of the adenoids permanently relieved the symptom. He also reports a case of chorea in a child seven years of age, which was permanently relieved by the removal of adenoids. Holz concludes: 1. That an exophthalmus which is not of a mechanical nature is sufficient for a diagnosis of Basedow's disease. 2. That Basedow's disease is due to a poisoning of the central nervous system through abnormal internal secretions. 3 That adenoid vegetations can be the cause of Basedow's disease as well as epilepsy and chorea. 4. That some cases of Basedow's disease, epilepsy and chorea can be cured by the removal of adenoids.

The Radical Operation for Empyema of the Frontal Sinus.—FREUDENTHAL (*Jour. A. M. A.*, February 11, 1905).—The author's paper deals

principally with the chronic forms of suppurative frontal sinusitis. He states that by far the greatest majority of cases improve under intranasal treatment and that we should therefore exhaust all means possible to afford relief by intranasal means. The external operation should be advised. 1. When the purulent discharge is copious and the patient is apparently losing ground. 2. When the discharge is fetid and combined with persistent headache. 3. When the classical symptoms (brain pressure, swelling of the frontal region or dislocation of the eye ball) are present. He points out that there is no one operation that will answer in all cases. Freudenthal concludes as follows: 1. Regarding the conservative treatment of these cases, the remarks of Kuttner of Berlin, are to the point. Every one ought to try and live up to this conservatism as much as feasible. 2. In those cases in which we have to operate, Killian's method seems to give the best results at present. 3. The first opening into the frontal sinus must be below the outlined bridge, and only after exploring the sinus should another be made above it. 4. In the latter case we leave a bony edge which helps toward improving the cosmetic effect. 5. Closing the external wound immediately after the operation is by far preferable for such cosmetic effect.

Examination of the Blood in Children Before and After the Removal of Adenoid Vegetations.—TAKABATKE (*Archives of Otology*, February, 1905). According to Lichtwitz and Sabrazes, who investigated this point in 1900, there was always an improvement in the constituents of the blood. They found that the red corpuscles and the quantity of the hemoglobin were increased, while the number of the white blood corpuscles was diminished. Their examinations were not made at any definite intervals after operation. In order to arrive at definite conclusions the author examined the blood in twelve cases on the twenty-eighth day after operation. He found that the hemoglobin and red blood corpuscles had increased in eight of the cases, while in the others there was a diminution. The number of white cells diminished in all cases. All types of leucocytes were not decreased in the same proportion. The polyneuclear and eosinophiles were slightly increased while the large mononeuclear cells and the lymphocytes were diminished, but their diminution was greater than the increase of the first named and a general diminution of the white blood cells resulted. The increase of the red cells, together with the diminution of the white, indicate an improved condition of the blood, especially as an approach to the normal took place. The general condition improved and the body weight increased in all of the cases but one. In this one the condition remained stationary.

Ethylchloride in Nose, Throat and Ear Practice.—NEUENBORN (*Archiv. fuer Laryngologie*, Band 17, Heft 1) —With an experience of 400 cases, ranging from ten months to sixty-nine years of age, the author warmly recommends the employment of ethylchloride as a general anesthetic for all short operations, such as the removal of adenoids, tonsils, paracentesis of the drum membrane, etc. He employs an Esmarch's chloroform inhaler, using from six to eight layers of gauze in order to prevent the ethylchloride from going through the mask on to the face. From one-half to one gram for children and from five to ten grams for adults is

all that is required for short anesthesias. He always administers the anesthetic in the upright position, regardless as to whether the stomach is full or empty, as he did not have a single case of nausea or vomiting. In nearly all of the cases he observed a tremor of the upper eyelids. The pupils at first dilate slowly and as the anesthesia progresses they rapidly become fully dilated. The face becomes flushed but not cyanotic. The pulse and respiration remain normal as a rule. Complete anesthesia occurs in from one half to a minute and a quarter and lasts from one to five minutes. Consciousness is rapidly regained without any bad after effects. He quotes from the paper of Seits of Jena on ethylchloride narcosis, in which all of the reported fatal cases are reviewed. These are given in the proportion of one in every sixteen thousand. In conclusion the writer states that the principal advantages of ethylchloride for short operations are, the rapidity of its action, the absence of the stage of excitement and the rapid return of consciousness without any bad after effects.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

The Structure of Vaccine Bodies in Isolated Cells.—JAMES EWING (*Journal of Medical Research*, February, 1905).—The writer employed many methods to secure isolated epithelial cells free from artefacts for the study of so-called vaccine bodies, but none of the methods used was satisfactory to him until success was obtained by making "Klatsch" preparations of corneal vaccine lesions upon glass slides. In this way he was enabled to completely isolate disease cells by treating them as blood films. By this method several glass slides were thoroughly washed with soap and water, dried and freed from grease by heating in a Bunson flame. To the cornea presenting a vaccine lesion the slide is quickly applied and withdrawn without pressure or lateral motion. The cells are fixed upon the slide by gentle heat and subsequently with absolute alcohol for five minutes, and then stained by Nocht's method. The entire procedure may be completed and specimen ready for examination in ten minutes. If particles of dye adhere to the slide they may be removed by passing through strong alcohol for one minute. By this method the vaccine body and the entire structure of the epithelial cell is presented with a distinctness quite equal to that of the malarial parasite in blood smears, and incomparably superior to that obtained in sections of hardened tissue. It also demonstrates some structures not visible in sections of the cornea. From the advantages of this method the late phases of the vaccine body strongly support the view on chemical grounds, that the structure is an altered portion of the cytoreticulum, and that nuclear elements are concerned in its formation. Basic stain of the homogenous globules is present in many bodies from their early stages, and the gradual transformation of the reticulum into a substance resembling mu-

cus can readily be followed in isolated cells from lesions from four to seven days old. While the nucleus is apparently not much diminished in bulk, when the cells exhibit the large reticulated vaccine body, yet in the last stages the nucleus is usually reduced to a small fragment of its original dimensions. The author concludes by expressing the opinion that some doubt regarding the nature of the vaccine body will probably remain until some method is found by which it may be reproduced apart from vaccinia. Accumulated evidence goes to show that the toxin is specific for vaccinia and variola and no satisfactory hypothesis remains in view if this body is eliminated as an etiological factor in the disease. That its reproduction by other means can ever be satisfactorily accomplished seems very doubtful, since specific forms of degeneration are frequent features of infectious processes.

Implantation of Tissue and Its Relation to Cancer.—EDWARD H. NICHOLS (*Journal of Medical Research*, January, 1905).—The results of a series of implantations of tissue in sixty-two animals are given in this article. Both adult and fetal tissues were used. The implanted tissues were chiefly epithelial or mesenchymal tissues set free from their normal environment could acquire the power of unlimited growth and give rise to the formation of metastases. In some cases the implanted tissues proliferated, maintained their vitality and produced nodules analogous to dermoid cysts, and some were of large size. In no case was any nodule produced with unlimited growth or the formation of local or glandular metastases. The following conclusions are given as the result of this study:

1. Certain types of epithelia (epidermis), both adult and fetal, can be experimentally removed from their normal position and implanted into another part of the same animal, and under those circumstances can maintain their "potentiality of growth," retain their peculiar character and produce nodules analogous to dermoid cysts or more complicated teratomata.
2. In no case has any epithelia of a highly differentiated function been seen to maintain its power of growth or to proliferate.
3. The "potentiality of growth" is greater in the case of fetal than it is in that of adult tissues.
4. In no case has any infiltration of surrounding tissue by the transplanted epithelia been seen, nor any tendency to epithelial metastases.
5. Certain fetal connective tissues (cartilage) can be transplanted in the same way as epithelial tissues and maintain their "potentiality of growth."
6. Transplanted fetal tissues do not reproduce the stage of development at which they are transplanted, but tend to produce the ultimate stage of their normal development.

Fordyce's Disease.—C. J. WHITE (*Journal of Cutaneous Diseases*, March, 1905).—From the study of fifty-five cases of this disease of the lips originally described by Fordyce, an analysis of the results produces the facts that the disease consists of the presence of small, irregular macules or papules. The lesions vary in size from a pin point to a pin head. They are irregular, round and polygonal—like a mosaic. They may range

from yellow to pale buff in color. They are usually imperceptible to the touch except on the lower lip, when they sometimes assume a dome shape. They vary from a few lesions to a well-defined band, the length of the lip. Their presence in most instances is unknown to the patient, and they are in most instances upon the lower lip. The author believes, from the reason that about 70 per cent. of these people suffer from diseases which are intimately associated with the sebaceous glands, that the disease is closely connected with eczema seborrhœica rosacea, and possibly dyspepsia. Histologically, he finds changes analogous to this disease, the principal histologic factor being a ballooned and greatly swollen epidermis as well producing the reticulated degeneration seen in variola and some other diseases. He does not agree with more recent writers, who declare this disease is pathologically a sebaceous tumor, as it lies beyond the sebaceous tissue proper. On the other hand, he finds the essential change to consist of acethosis edema paraperatosis. In other words, he finds exactly similar conditions to those described by Fordyce, the original observer of the disease. Clinically, the cases with their possibly persistent dyspepsia and concomitant seborrhœic disease, would tend to strengthen the pathologic findings of those writers who would call the disease acne rosacea of the mucous membranes. Pathologically, however, the sections counteract this view absolutely, as the sebaceous glands lie wholly beyond the boundaries of the disease proper.

The Nature of Cell Inclusions in Cancer.—Robert B. Greenough (*Journal of Medical Research*, January, 1905).—In the present communication it is the purpose of the writer to record the results of further observations, to assemble some of the observations of others and to review the secretion hypothesis as it now stands. In this extensive work the following conclusions are given:

1. The double cell inclusions of cancer are practically constant in cancer of glandular origin.
2. They are not found in epithelioma and are almost invariably present in sarcoma.
3. Their size, structure and staining reactions are such as to justify the assumption that they are vacuoles in the cell protoplasm, containing a material which is coagulated and shrunken by the use of tissue fixatives.
4. The occurrence of vacuoles of this nature is chiefly a phenomenon of cell secretion.
5. Similar vacuoles may be produced, however, in certain cases of phagocytosis, and by the degeneration of the nucleus.
6. Secretion vacuoles of the form of typical cancer cell inclusions are found in certain non-cancerous diseases of the mammary gland.
7. In such cases the secretion vacuole is between the nucleus and the lumen of the gland.
8. The inclusions in adeno-carcinoma occupy a similar position between the nucleus and the lumen of the gland.
9. In more advanced carcinoma the gland lumen is lost. The secretion vacuole cannot escape and remains within the cancer cell to undergo further increase and ultimate degeneration.
10. Cell secretion is a phenomenon which is lost in the progressive anaplasia of cancer cells.

11. Cell inclusions are more frequent in slow growing cancer and are less numerous in advanced cancer with rapid cell division.

12. No reason exists for the interpretation of these appearances as of parasitic origin.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

On Transillumination of the Sclerotic.—SWANZY (*Ophthalmic Review*, February, 1905).—Leber's instrument for transillumination of the sclerotic is described. It consists of a metal capsule enclosing a small electric lamp, the anterior end of which is in contact with a short glass rod

The exposed end of the rod is placed against the sclerotic of the cocainized eye and the light turned on. If the eye is normal or even if a ripe cataract be present the pupil lights with the familiar red glow from the choroid. Should an intraocular new growth be present internal to the spot on which the glass rod is applied, the pupil remains dark. It occasionally happens that the rod must be slipped over the whole region of the exposed sclera before the search for the tumor is successful. If, after careful search, no such spot is found it is concluded that no tumor is present in the region which can be reached with the glass rod.

Transillumination is of the greatest value in cases where there exists a strong suspicion of the presence of a tumor, but where, owing to opacity of the media or detachment of the retina an ophthalmoscopic examination fails to throw light on the subject. The method is, of course, limited to the detection of tumors anterior to the equator of the globe, *i. e.*, to the region where the glass rod can be brought in contact with the sclerotic.

A New Operation on the Ocular Muscles-Muscle Lengthening.—LANDOLT (*Arch. d'Ophtalm.*, January, 1905), whose views in opposition to muscle-cutting are well known, describes an operation which he practices in inveterate cases of convergent squint with marked contracture of the muscle accompanied by change of structure and loss of elasticity. His device, which is supplementary to the advancement of the opposing muscles, consists in lengthening the internus by methods similar to those in vogue among orthopedic surgeons.

The muscle having been exposed by a longitudinal incision through the conjunctiva is incised longitudinally and transversely so as to form a "step." One section is then slid over the other and the two are sutured end-to-end. A modification consists in making an oblique incision from one side of the muscle to the other, sliding and suturing as before.

It is needless to say that the operation is an exceedingly delicate one. The muscle is put on a stretch with a squint hook and the assistant draws the eye as far as possible in the direction opposite to the action of the muscle. Sutures should be inserted in the posterior section before the division of the muscle. The advantages of the operation over

tenotomy are twofold: (1) The scleral attachment is not disturbed, and (2) the normal extent of rotation of the ocular globe is not impaired.

Saccharine Saline Injections in Ophthalmic Practice (Sodium Benzoyl-Sulphonic).—L. WEBSTER FOX (*Ophthalmology*, October, 1904).—Subconjunctival injections of this drug in the strength of five, ten and fifteen grains to the ounce are advocated by Fox in various ocular troubles. The injections are given once or twice a week for six to twelve treatments. Their efficacy is conspicuously manifest in the following conditions:

1. Vitreous opacities following any form of vitreous, retinal or choroidal disease.
2. Interstitial keratitis. Haziness of the cornea remaining after subsidence of the acute attack was found to clear surprisingly.
3. Notable improvement in every case of corneal opacity secondary to prolonged corneal disease.

The Environment and Visual Requirements of Railway Enginemen and Firemen.—N. M. BLACK (*Jour. A. M. A.*, February 18, 1905).—The writer's paper is based on personal observations from an engine cab, in which he traveled for upward of five thousand miles. It is freely illustrated with photographs, which depict various extraneous conditions interfering with the quick determination of signals when the train is running at a high rate of speed. Dr. Black's conclusions are as follows:

1. The best known standard of visual acuity and color perception should be required of men concerned in the active operation of trains.
2. The signal systems now in vogue, while they are not perfect, are sufficiently adequate for the standard of vision required and the present speed of trains.
3. Certain physical and accidental conditions about engines interfering with vision cannot be overcome unless the position of the enginemen can be changed.
4. Certain atmospheric conditions interfering with vision cannot be overcome; others can be mitigated or entirely relieved by the use of some form of protection to the eyes.
5. Glasses are not a hindrance to enginemen, and their use should be allowed when required to protect the eyes or to bring the vision up to required standard, but no person should be accepted into service requiring them or who will accept a plus lens of 1½ or 2 D.
6. With four reports emanating from four different sources of equal merit and standing, and all different in small details, the obtaining of perfect uniformity in examination of railway employes is out of the question, as it cannot be expected that the officials of different roads will all decide on the same report.
7. Furthermore, state legislation on the subject of vision and color perception of railway employes is being seriously considered, two states, Massachusetts and Ohio, having statutes regulating this. As nearly all railroads pass through a number of states, it would be well for the societies from which these reports emanate to agree in all details, as the state laws will necessarily be based on them, and if different states have different standards an engineman qualifying in one and not in another, with his run extending in both, would be in serious difficulty.

BOOK REVIEWS.

VON BERGMANN'S SURGERY. A System of Practical Surgery. By DRS. E. VON BERGMANN, of Berlin; P. VON BRUNS, of Tuebingen, and J. VON MIKULICZ, of Breslau. Edited by William T. Bull, M. D., Professor of Surgery in the College of Physicians and Surgeons (Columbia University), New York. To be complete in five imperial octavo volumes, containing over 4,000 pages, 1,600 engravings and 110 full-page plates in colors and monochrome. Sold by subscription only. Per volume, cloth, $6.00; leather, $7.00; half morocco, $8.50, net.

When the first edition of this large and exhaustive work was placed upon the market in Germany, in 1901, the demand for it was instantaneous; in fact, the first edition was rapidly exhausted, and the second soon after undertaken. This second edition was a rearrangement of and an improvement upon the first, consequently we may be said to profit by the fact that our translation is of the more recent and not of the older number. We have something more than a translation, for the American editors have added to the original, both as regards text and illustrations, much that is new and useful from the literature of Germany, England and America. As to the size of the work, something must be said; it consists of five large volumes, and hence can present each subject so fully in the space thus at command that it can be truly said, with the editors, to be encyclopedic in character. Not only is each author able to give his own preferred method of treatment in a given case, but he can at the same time outline all the best ideas, and thus the practical surgeon has a work of value at his command when the ordinary text-book can do no more than fill the wants of the student or of the general practitioner at most. Surgeons will be pleased to note that the wearisome chapters, usually repetitions, on general subjects, such as anæsthesia, hæmorrhage, antiseptics, etc., have been omitted; in fact, there is no dead wood or padding in the book. It is essentially clinical in nature, so intended for the man who is at work, and that the clinical material contained might have the greatest possible value, a different German surgeon was chosen to write each chapter, and every writer is a master in his field. This phase of the subject will be readily appreciated when it is seen that Bergmann and Kroenlein wrote much of the surgery of the head, Krause that of the Gasserian ganglion, Schede that of the kidney, Sonnenburg that of the bladder and prostate, Koerte that of the peritoneum, Mikulicz that of the stomach and intestines, Kehr that of the biliary passages and gall bladder, Bruns that of the larynx, Eiselberg that of the thyroid and Hacker that of the esophagus. Each of these men has, to a large extent, made his reputation by work upon the subject connected with his name in this list, hence it is readily appreciated that the reader has access to a group of monographs, each written by one of the leading surgical lights of Germany. There are, in addition to the list above, many less well known names of men who have done most excellent original work upon the subjects allotted to them. In keeping with the well known continental idea, the various sub-chapters allotted to the individual writers are grouped under their various general headings in different volumes as follows: No. 1 treats of the head, No. 2 of the neck, thorax and spinal column, No. 3 extremities, No. 4 of the alimentary tract, No. 5 of the genito-urinary organs. The arrangement of the original has been somewhat changed, but the reviewer considers that the work has been improved thereby. One decided improvement on the German edition consists in the addition of an index at the end of each volume; the foreign edition had but one general index at the end of the whole work, thus making it necessary to look in the last volume to ascertain the location of material contained in any one. A more adequate idea of the size of the undertaking is gained when it is explained that there are 4,220 pages and 1,976 illustrations; at the same time it may be said that the technical work exhibited is of the best. It may be said, with regard to size as well as to quality, that this system of practical surgery more nearly than any other one work represents modern surgery; there may be some faults and flaws in it, but for general excellence as well as for the high standing of its authors, it probably stands without a rival today. It seems unnecessary to go into details as to the contents of the various chapters; it is enough to state that every part of the body is apportioned to an authority on the same, and that the injuries, as well as the diseases to which it is likely, are considered fully and in a masterly manner.

NOTHNAGEL'S PRACTICE. American Edition. Diseases of the Intestines and Peritoneum. By Dr. HERMANN NOTHNAGEL, of Vienna. The entire volume edited, with additions, by HUMPHREY D. ROLLISTON. Octavo volume of 1032 pages, fully illustrated. W. B. Saunders & Co., Publishers, Philadelphia, New York and London. 1904.

This, one of the most valuable volumes in the Nothnagel series, is by the famous clinician, Prof. Nothnagel himself. It is one of the most exhaustive treatises on the subject of the intestines and peritoneum ever published, and is written by one whose authority on these subjects is undisputed. Almost 700 pages are devoted to the diseases of the intestines alone, and practically every known disease of these organs is treated in detail. Not the least important feature of the work is the exhaustive bibliography.

Editorial editions include sections on intestinal sand, sprue, ulcerative colitis, and idiopathic dilatation of the colon. Appendicitis and peritonitis have been given unusual space. Appendicitis is discussed under the general head of acute circumscribed peritonitis, and is defined as an "inflammation of the peritoneum starting from the intestine in the right iliac fossa." We often find this subject considered under the head of inflammations of the mucous membrane. The disposition of the subject in this work, however, seems to be the better one, since the peritoneal involvement in appendicitis, though secondary in point of time, is primary in point of importance.

The author regrets the adoption of the term appendicitis because it is a Latin word with a Greek termination, and suggests the term "scolecoiditis." The volume is full of innovations, and is written in a very interesting style.

NOTHNAGEL'S PRACTICE. American edition. Diseases of the Pancreas, Suprarenal Capsules and Liver. By DRS. L. OSER and E. NEUSSER, of Vienna, and DRS. H. QUINCKE and G. HOPPE-SEYLER, of Kiel. Edited, with additions, by Dr. Reginald H. Fitz and Frederick A. Packard, under the editorial supervision of Dr. Alfred Stengel. W. B. Saunders & Co., Philadelphia.

One who has endeavored to follow the progress made in recent years in the diseases of the pancreas, liver and the suprarenal glands can fully appreciate a volume of this sort. In this work some of the greatest authorities on these subjects have condensed and interpreted the work of many men and many years in a most satisfactory manner. Prof. Oser is the author of the section on the pancreas, and has presented a most complete exposition of the subject. Until a few years ago reliable literature on pancreatic diseases was very meagre; 300 pages are devoted to the subject in this work, the bibliography alone comprising some thirty pages. The anatomy, physiology, pathology and the results of recent experiments are all carefully considered, together with the symptomatology and treatment of the several diseases.

The section on diseases of the suprarenal glands is also complete. However, our knowledge of this subject is not all that could be desired. About thirty pages are devoted to a consideration of the anatomy, physiology, pathologic anatomy and the therapeutic properties of the suprarenal glands.

The section on diseases of the liver covers six hundred pages, and is complete in every detail. The names of Quincke and Hoppe-Seyler are so closely associated with the progress on this subject that little need be said in praise of this section of the work. The diseases of the bile passages as well as of the liver are carefully and concisely presented.

NOTHNAGEL'S PRACTICE. American edition. Tuberculosis and Acute General Miliary Tuberculosis. By DR. G. CORNET, Berlin. Edited, with additions, by Walter B. James, M. D., New York. Authorized translation from the German under the editorial supervision of Alfred Stengel, M. D. W. B. Saunders & Co., Philadelphia. 1904.

No work could prove more valuable to the physician at this time than a comprehensive treatise on tuberculosis, reviewing in full the evolution of our knowledge on this subject. Such a one is the work presented by Prof. Cornet. The recent developments with reference to the treatment of tuberculosis have given a new impetus to the subject in general, and scientists and laymen are manifesting such an interest in this disease in its relation to the public welfare as has never been known before. Scientists, philanthropists, states and nations are uniting in their efforts to subdue "the white plague." This volume deals with the subject in its every phase.

Chapters are devoted to an historical survey, to the tubercle bacillus, its morphology, its biology and its chemistry, to the pathological processes, to the modes of invasion, to infection, to heredity and to predisposition. About 300 pages are devoted to pulmonary tuberculosis alone, and in this section a most comprehensive view of the treatment of the disease according to the most approved methods are presented. Not the least important feature of the work is the very exhaustive bibliography, to which is devoted almost one hundred pages.

Part three is devoted to acute general miliary tuberculosis. The work as a whole is probably the most complete treatise on this subject in existence.

REFRACTION AND HOW TO REFRACT. Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eyeglasses, etc. By JAMES THORINGTON, A. M., M. D., Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. Third edition, 215 illustrations, 13 of which are colored. 314 pages. Price, $1.50 net. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street. 1904.

Dr. Thorington's excellent manual, which has now reached a third edition, hardly needs an introduction to the student of ophthalmology. The work is based on the author's lectures on refraction, delivered at the Philadelphia Polyclinic, and is intended for all beginners in ophthalmology, especially for those who have a limited knowledge of mathematics. The book is eminently systematic and practical. For the present edition the author has gone over the text very carefully and has added fifteen new illustrations, together with a description of several new instruments which have lately been brought forward as material aids in estimating refractive errors. Emphasis is laid on the necessity for the utmost exactness in determining the refraction. The book can be recommended without reserve.

NOTES FOR THE GUIDANCE OF AUTHORS IN THE SUBMISSION OF MANUSCRIPTS TO PUBLISHERS. The Macmillan Co., New York. 1905.

A convenient booklet, giving general directions for the preparation of manuscript, proof-readers' marks, words frequently misspelled, and the like.

DAS SEXUELLE LEBEN DER CHRISTLICHEN CULTURVOELKER. Von Dr. JOSEF MUELLER, Leipzig. Th. Grieben's Verlag (L. Fernau). 1904. Price, Mk.4.

This is the third and last volume of a series devoted to a history of the sexual life from the oldest times to the present day. This volume elucidates the development of morality, in its broadest sense, under the influence of the teachings of the Christian religions. Mueller begins with the time of Christ and the apostles, and explains the doctrines advocated by them regarding marriage, celibacy, virginity, etc. After a consideration of the German influence at the beginning of the Middle Ages, with a very instructive chapter on knights and monks, the writer next describes the radical changes which took place during the time of the Reformation. He devotes a special chapter to a comparison of the Catholic and Protestant views on sexual morality. Of special interest for the physician is the last chapter, in which the author argues against the attempts at a reform of marriage on the grounds that monogamy leads to a degeneration of the race.

The volume before us offers very interesting reading, and forms a most valuable document for the modern tendency to improve sexual hygiene by the propagation of better information on the subject.

A Compend of the Practice of Medicine. By Daniel E. Hughes, M. D. P. Blakiston's Son & Co., Philadelphia. 1904.

On reading a book of this sort one wonders to what portion of the medical public it can appeal. It does not contain the sort of information for which a practitioner is apt to consult a book of reference, and in its brevity and dogmatism it is a vicious book to put into the hands of a medical student. Examples of what is meant can be found on nearly every page. Thus, at random, on page 11 a list is given of temperatures with the corresponding pulses, without a word about the many physiologic exceptions to such a rule. On the same page the reader is advised to give aconite or veratrum viride when the pulse is full, strong and rapid, and cardiac tonics whenever it is weak—advice directly opposed to the best practice. On page 17, in enumerating the possible agents of typhoid infection, no mention is made of direct contagion on the part of those handling the excreta. In describing the diazo-reaction, a brownish-red ring is made the criterion of a positive test. Similar examples might be enumerated indefinitely. Poor judgment is used in the space given to various subjects. Thus, an entire page is devoted to Warburg's tincture, whereas not a word is said regarding the differential diagnosis between gall-stones and pancreatic disease. The style and grammar, too, are not above criticism, the split infinitive being very common. It is a sad commentary on American medical literature that this book is now being issued in its seventh edition.

Diaetetisches Kochbuch. Von Dr. Otto Dornblueth. Second edition. Wuerzburg: A. Stubers Verlag (C. Kabitzsch). 1905.

This little book is by far the best medical cook-book that has come to our attention. Many of the recipes will seem strange to American readers, being typically German, but they will be found tasty and easily digestible. An excellent division is devoted to the consideration of special dietetics. The directions for preparing palatable dishes for diabetics will be found particularly valuable. The little book well merits translation.

A Practical Treatise on Medical Diagnosis. By John H. Musser. M. D. Fifth edition. Lea Bros. & Co., Philadelphia—New York. 1904.

Musser's Diagnosis is so well known to the medical profession that this new edition does not require extensive discussion. Suffice it to say that it is as entirely abreast of the times as its predecessors, and that in it the reader will find most of the newer diagnostic methods as well as the best of the old. The illustrations are of a high grade of excellence.

Normal Histology and Microscopical Anatomy. By Jeremiah S. Ferguson, M. D. New York and London: D. Appleton & Co. 1905.

On 738 pages, and by means of 462 partly colored illustrations, the author gives an up-to-date presentation of the subject. There is no objection to be made against the way in which this is done, and only here and there an objection to some illustrations. The contents of the book really give a good picture of our knowledge on histology, and therefore, as such, must be recommended. The question arises, however, whether such books were not on hand, whether there was a necessity for this one, to increase the literature on the subject by the addition of one large volume. This necessity is certainly not present, as the last years have brought us a number of classic treatises on the subject from authoritative sources, that for a long time to come will supply all the desire for information on it. Although Ferguson's book is good and authoritative, it does not bring anything that would not be found in books already published. The appended chapter on technic is too condensed to be of any value, and would have been better omitted.

Ueber die Nebenwirkungen der Modernen Arzneimittel, von Prof. Dr. Otto Seifert. Wuerzburger Abhandlungen aus dem Gesammtgebiet der Praktischen Medizin. V. Band, Heft. 1. Wuerzburg, A. Stuber's Verlag (C. Kabitzsch). 1904.

The rapid increase in the number of new remedies has necessitated a new edition of Seifert's monograph three years after the first one was issued. On looking it over one obtains rather a gloomy impression as regards the value of most of our therapeutic novelties. Very few of them it would seem are free from serious defects, either as regards certainty of effect or safety of administration. Thus, to select a few examples, a host of observers has reported unpleasant after effects of aspirin; euquinin has the same drawbacks as quinine; salipyrin is a dangerous drug; anesthesin, otherwise valuable, may create a habit; orthoform may be very toxic; theocin may give rise to severe digestive and nervous disturbances, etc., etc. Perhaps the most valuable feature of the book is the critical discussion at the end of each chapter. Readers of German will find the little volume of interest.

Medical Laboratory. Methods and Tests. By Herbert French, M. D., London. Publishers: W. T. Keener & Co., Chicago. Price, $1.50.

This little volume contains a collection of the more common chemical tests used in the examination of urine, blood, sputum, feces, gastric contents and serous exudations. Short descriptions are given of the microscopical pictures of these substances. Briefly, the conclusions are pointed out which may be drawn from these tests and examinations, special stress being laid upon the fallacies to which each is liable.

A Text-Book of Clinical Diagnosis by Laboratory Methods. By L. Napoleon Boston, A. M., M. D. Pages 549, with 320 illustrations, many of them in colors. W. B. Saunders & Co., Philadelphia, New York and London. 1904.

Few books on clinical diagnosis can be so unreservedly commended as this one. It is thoroughly up to date in every respect, and contains practically every laboratory method of diagnostic importance. The chapters on the blood are particularly complete and interesting. All the important hemoglobinometers and other apparatus, all the useful stains and the like, are discussed in detail. It is somewhat surprising that a paragraph of text and a full page color plate should be devoted to Anderson's piroplasma hominis, in view of the strong suspicion, to say the least, that exists that mountain spotted fever is merely a form of cerebro spinal meningitis, and that Anderson's parasites are merely artefacts. Errors of this sort are, however, an almost unavoidable result of the effort to include the most recent researches. The general make-up of the book deserves all praise. It is well printed on dull paper, and the illustrations are of peculiar excellence, the colored plates depicting the blood, resembling the actual appearance under the microscope very closely. An elaborate index greatly increases the value of the book.

The Sexual Life. By C. W. Malchow, M. D. The Burton Co., Publishers, Minneapolis, Minn. 1904.

It may be taken for granted that any serious and exact study of sexual matters will not always be given general approval. Only too often the motives of the authors of such books, abounding with histories of "interesting" cases, are decidedly objectionable. This volume, dedicated by the writer to his mother, is exempt from any suspicion. It presents a scientific consideration of the natural sexual impulse, of normal sexual habits and propagation, and of the physiology and hygiene of sexual life. There cannot be any doubt but that there is need for such a book. The importance of sexual anomalies in the etiology of various diseases is at the present day well recognized, and it falls into the domain of every practitioner to seek information on the normal and abnormal action of the sexual instinct.

BEFRUCHTUNG UND GESCHLECHTSBILDUNG. Von PROFESSOR DR. HEINRICH BAYER. Verlag von Schlesier & Schweikhardt in Strassburg. 1904. $0.40.

This is a most interesting little monograph, in which the writer deals with the much discussed question of the determination of the sex of the fetus. He attempts to furnish convincing proof for his theory, that the sex is determined in the moment of impregnation. The union of the centrosomes of spermatozoid and ovicell conveys to the latter not only the faculty but also the direction of further development.

DISEASES OF THE NOSE AND THROAT. By D. BRADEN KYLE, M. D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia. Third edition, thoroughly revised and enlarged. Octavo volume of 669 pages, with 175 illustrations and 6 chromolithographic plates. Philadelphia, New York and London: W. B. Saunders & Co. 1904. Cloth, $4.00 net; sheep or half Morocco, $5.00 net.

This (the third) edition of Kyle's work has not been materially altered. The entire book has, however, been carefully revised and such additions have been made as were rendered necessary by recent medical progress. The most important changes and additions have been made in the chapters on keratosis, epidemic influenza, Gesuny's paraffine method for the correction of nasal deformities, and in the one on the x-rays in the treatment of carcinoma. The etiology and treatment of hay fever have been partially rewritten and much enlarged, as has also the operative treatment of deformities of the nasal septum. In the chapter devoted to general considerations of mucous membranes and hay fever the author records the results of his experience in the chemistry of the saliva and nasal secretions in relation to diagnosis and treatment. Kyle believes that the examination of the saliva will often give more real information than an examination of the urine. The classification of diseases is very complete, and the descriptions are clear. As for treatment, the medical side is discussed at length, whereas the surgical, especially the operative technique, is very briefly considered. As a whole, this work must be considered one of the best of modern text-books on diseases of the nose and throat.

THE NOSE AND THROAT IN MEDICAL HISTORY. By JONATHAN WRIGHT, M. D., Attending Laryngologist to King's County Hospital. Fifty illustrations. Published by the Laryngoscope Co., St. Louis, Mo. Price, $2.00 net.

In linking together the records of the nose and throat in the history of medicine the author has indeed constructed a most fascinating story. His notes have been taken chiefly from original sources, and the work will undoubtedly become a classic in American medical literature. While the work deals specially with the history of medicine as related to the nose and throat, there are numerous references which make the book interesting to the general practitioner as well. It is without doubt a most important contribution to the history of rhinology and laryngology.

COURS DE DERMATOLOGIE EXOTIQUE. By E. JEANSELME, of the Faculty of Medicine, assisted by M. TREMOLIERES, interne of the hospital. Masson et Cie, editors, Paris, France. Price, 10 francs.

This book consists of a course of lectures delivered at the Institute of Colonial Medicine of Paris, by Dr. Jeanselme. The lectures are condensed and written in an entertaining and practical manner, so that the essential points of exotic dermatoses are clearly outlined. The language is clear and the French is exceedingly easy for an English-speaking person to read. The subjects of leprosy, syphilis, pian or frambœsia,

phagedenic ulcer, elephantiasis, ring-worm, Madura foot, and other maladies peculiar to tropical countries, are fully described, together with the histo-bacteriological researches to date. Such a book will be of great interest to those going to our tropical colonies, and, in fact, to all physicians who might come in contact with people who have sojourned in the tropics and returned home with some of these souvenirs. Tropical medicine has in the last few years received an incentive through the schools of Paris and Liverpool, and special books on this subject are a great addition. The volume contains five colored plates and 108 illustrations in black and white, all of which are well executed.

MANUAL OF ANTENATAL PATHOLOGY. The Embryo. By J. W. BALLANTYNE, M. D., F. R. C. P. E., F. R. S., Edin.; Lecturer in Midwifery and Gynecology, Edinburgh. Publishers: William Green & Sons, Edinburgh. 1904.

In the number of August, 1902, of this journal we have referred to the first volume of this work. We expressed on that occasion the opinion that this work cannot fail to arouse the interest of every modern physician. It seems that our prophesy has proved true. Since this classical work of Ballentyne has appeared, quotations from "Antenatal Pathology" are rather the rule in papers dealing with the various diseases of pregnancy or the new born infant. While the first volume dealt especially with the diseases of the fetus, the present one is concerned with the pathology of the embryo and, to a small extent, with the morbid tendencies of the germ. Obviously, pathology of the embryo is almost identical with teratology, and this subject practically forms the material for this volume. In accord with the original aim of the author to present the pathology of the unborn child in such a form as to point to the possible prevention or treatment of antenatal disease the subject of teratology is mainly approached from the side of causation. The immense amount of valuable information embodied in this volume can easily be inferred from a statement in the author's preface, in which he says that he intended to treat the subject of pathology of the germ on the same scale of completeness, but that he gave up the idea because it would have entailed the necessity of writing a third volume of the same size (about 700 pages.)

This second volume completes a work which, in the history of medicine, will always be recognized as the foundation of a new department of scientific medicine known as "Antenatal Pathology."

PRACTICAL PEDIATRICS. A Manual of the Medical and Surgical Diseases of Infancy and Childhood. By Dr. E. GRAETZER. Authorized translation, with numerous additions and notes, by HERMAN B. SHEFFIELD, M. D. Pages xii.–544. Crown octavo. Flexible cloth, round corners. Price, $3.00 net. F. A. Davis Company, Publishers, Philadelphia.

The profession is to be congratulated on this addition to the list of smaller works on pediatrics. Dr. Graetzer has gathered together an enormous amount of clinical and practical data, and presented it in clear and concise form. The additions of Dr. Sheffield add very greatly to the value of the work, and his translation is a model one. The addition of a comprehensive section on materia medica and therapeutics is a noteworthy feature, and one that enhances the usefulness of the work as a manual of ready reference. The bookwork is excellent.

A TEXT-BOOK OF PHYSIOLOGICAL CHEMISTRY. By OLOF HAMMARSTEN, of the University of Upsola. Authorized translation from the author's enlarged and revised fifth German edition by John A. Mandel. John Wiley & Sons. 1904.

The importance of a thorough knowledge of the chemistry of the human organism is being realized more and more. A profound knowledge of the diseases to which man is

heir cannot be had without a thorough understanding of the physiological processes constantly taking place in the body. The chemistry of a cell is the life of that cell; the chemistry of a group of cells constitutes the physiological function of an organ; the functions of a group of organs constitute the life of an individual. A knowledge, therefore, of physiological chemistry is indispensable to the physician.

Hammarsten's original work in German is too well known to need praise here. Under the translation by Mandel the work seems to have suffered in no particular. The chapters on the liver, digestion, the chyle, lymph, transudates and exudates are especially good and complete in every detail.

The work is not intended as a complete hand-book, but as a short text-book. It comprises about 700 pages, containing no superfluous matter.

A TREATISE ON OBSTETRICS. For Students and Practitioners. By EDWARD P. DAVIS, A. M., M. D., Professor of Obstetrics in Jefferson Medical College; Professor of Obstetrics and Pediatrics in the Philadelphia Polyclinic, etc. New (2d) edition, thoroughly revised and much enlarged. Octavo, 800 pages, with 274 engravings and 39 full-page plates in colors and monochrome. Cloth, $5.00, net; leather, $6.00, net.

If we may accept as the necessary requisites of a commendable text-book for the student, systematic arrangement, clearness of expression, good definitions and illustrations, reliability of information and a few other qualities, then we must say of this treatise on obstetrics, that it is wanting in every respect. The space at our disposal does not permit of enumerating all the reasons that compel us to be so severe in our judgment concerning the volume before us, but a few shall be given.

An extremely unsatisfactory and partly incorrect description of syncytioma malignum, although a disease of the puerperal or post-puerperal state, is given under "Pathology of Pregnancy." In illustration of this peculiar new growth of the uterus, the author quotes the history of a case of his observation, in which, however, no tumor was found in the uterus. On page 233 syncytioma is taken up once more, this time in a chapter entitled "Acute Infections Complicating Pregnancy." Not only the obscure definition and description is repeated, but once more we read the history of this one case, which so poorly illustrates the typical condition and symptoms of syncytioma. On page 241 the author even describes the "diagnosis of syncytioma during pregnancy" (!). We may mention in this connection that the chapter dealing with "acute infections" considers in the order given here: Gonorrhea, syphilis, cancer, syncytioma, typhoid fever, erysipelas, etc. On page 58 the author includes in the routine examination of the urine during pregnancy, its examination for the presence or absence of bacteria, a demand which in practice hardly could be carried out.

But probably most striking are the numerous incorrect statements. To quote a few: Sounds heard in the umbilical cord are *nearly* as rapid as the fetal heart sounds (p. 41). Duovular twins are of different sex (p. 280). The author gives dimensions promiscuously in centimeters and inches, temperatures in Celsius and Fahrenheit, at times recording the equivalents in the other unit, we thus meet with the following interesting facts: On page 51 we find 26 1-2 cm.=10 inches; in the next line 28 cm. = 11 inches, which makes one inch equal to 1 1-2 cm. On page 81, however, we find 25 cm. = 11 1-9 inches.

It would seem that the author at times does not succeed in expressing his ideas in a very distinct form; we find the following sentence: The hemoglobin of fetal blood is in excess of that in the mother, averaging, according to Bidone, and Ferrari 120 *degrees* (?), Elder and Hutchinson giving *them* (?) as 18,000 per cubic-millimeter, or twice as many as in the adult.

A sentence like the following certainly does not sound well (p. 45): The feet may present and a foot presentation be present.

We assume that it is due to careless proof reading that we read on page 284 of twins, one of whom *has* acardiacus; or, on page 546, that the cervix rotates posteriorily. In this respect the carelessness is very striking (*prolferation*, *public joint* on page 52, etc., etc). We find the names of some of the best known obstetricians misspelled; Wallenbergh, instead of Wellenbergh, Van Huvel, instead of Van Huevel; De Ribe, instead of De Ribes and so on. But most surprising is the persistent misspelling of the name of our famous French contemporary, Farabeuf. There are probably twenty or

thirty very good diagramatic illustrations borrowed from the excellent book of this author, under each of them his name is given as Faraboeuf.

The illustrations of this treatise as a whole are not very good, some are extremely indistinct, the practical value of others is not apparent (*e. g.*, plates xv and xvi), important illustrations are missing, *e. g.*, of the fetal circulation. We hardly think it necessary to quote any more of the many deficiencies of this volume. They should not exist in a "second" edition. In its present form this text-book could hardly be recommended to the student. The experienced physician will find it to contain a great number of interesting facts, but a serious perusal of the volume is made practically impossible by the constant irritating effect produced by the many mistakes, a few of which have been pointed out in the preceding lines.

PROGRESSIVE MEDICINE, VOL. I, March, 1905. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia. Octavo, 298 pages, 10 engravings and a full-page plate. Per annum, in four cloth bound volumes, $9.00; in paper binding, $6.00, carriage paid to any address. Lea Brothers & Company, publishers, Philadelphia and New York.

This volume treats of a variety of subjects—surgery of the head and neck, the thorax, acute infectious diseases and diseases of certain of the organs of special sense—on the plan which has from its inception been the characteristic feature of the series. What these features are it is perhaps hardly necessary to specify in detail, after so long a period of satisfactory trial.

ATLAS AND EPITOME OF GENERAL PATHOLOGIC HISTOLOGY. By Dr. HERMANN DUERCK. Translation edited by LUDWIG HECTOEN. With 80 colored plates and 36 text figures. Saunders' Medical Hand Atlases. Philadelphia. 1904.

The work of Duerck is conceived after the plan of the other volumes of analogous intent published by him and translated one or two years ago in the same series. What has been said of them holds good for the new book: that in its arrangement and outfit it cannot be excelled. The remarks made before about the necessity for these books shall not be repeated. It appears that they detract too much from the acquisition of knowledge by original study and work. As a reference, and for comparison, they are invaluable. The translation is remarkably exact and good, and the author has left intact the spirit of the original by inclosing notes and additions of his own in brackets—a usage that ought to be followed generally.

CLINICAL EXAMINATION OF THE URINE AND URINARY DIAGNOSIS. A Clinical Guide for the Use of Practitioners and Students of Medicine and Surgery. By J. BERGEN OGDEN, New York. Second edition, thoroughly revised. W. B. Saunders & Co., Philadelphia, New York and London.

In the few years of its existence this volume has come to be recognized as a standard work on this subject. It combines the theoretical with the practical, and takes up in detail the subject of urinary diagnosis, and the application of information furnished by careful chemic and microscopic examination of the urine. In this respect it differs from most works on the subject, since they are devoted almost exclusively to urinary chemistry.

Part I. is devoted to chemic and microscopic methods; while Part II. deals with the diagnosis and differential diagnosis of disturbances and diseases of the kidneys and urinary passages, whether local or general, medical or surgical.